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## I.—A CONTRIBUTION TO THE ANATOMY AND ETIOLOGY OF RUPTURE OF THE PERITONEAL PORTION OF THE VAGINA DURING LABOUR.

By D. BERRY HART, M.D., Lecturer on Midwifery, School of Medicine, Edinburgh.

*(Read before the Edinburgh Obstetrical Society, 16th May 1883.)*

RUPTURE of the vagina during parturition is one of the rarer occurrences in obstetrics. Its explanation, however, none the less demands our attention, inasmuch as it is a preventible accident. While Bandl, in his great work on *Rupture of the Uterus*, has given an explanation of most uterine ruptures so clear and comprehensive that little has been added to it, no one has taken up the question of vaginal rupture and tried to show exactly how and why it should ever happen. To-night I hope to put the anatomy and causation of rupture of the vagina during parturition on a more exact basis than it has hitherto been.

We therefore consider the position of matters at the beginning of parturition, and the changes which take place in the cervix and pelvic floor as the child is driven through them. At the beginning of parturition we have the child lying in the cavity of the body of the uterus and about to be driven through the cervix uteri and pelvic floor (Fig. 1).

The pelvic floor is a thick, unbroken, fleshy layer, divided into anterior and posterior segments by a cleft—the vagina. When the woman is erect this cleft makes an angle of about  $60^{\circ}$  with the ground. On the upper surface of the pelvic floor the uterus

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lies. It is here made up of the cervix or cervical canal, which has a lower and upper opening. The lower opens into the top

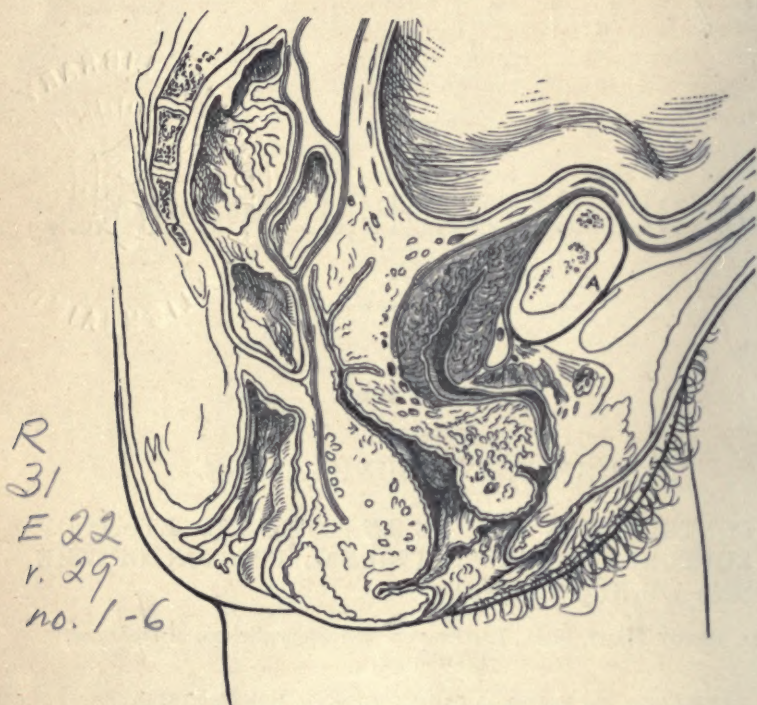


FIG. 1.—Pelvic floor and uterus at end of gestation (Braune).

of the vagina, the upper into the cavity of the uterus. The length of the cervical canal is about  $1\frac{1}{2}$  inches, and its lumen is such that one could pass his finger into it. Strictly speaking, its anterior and posterior walls are in apposition, and a small portion of its upper end has merged into the uterine cavity. The uterus proper is a large sac containing the foetus and membranes. The only point we have to do with at present is its muscular fibres. For our purpose it is sufficient to consider them as circular and longitudinal. The longitudinal run up the front and down the back of the uterus and pass into the cervix below, probably into the pelvic floor too. They have other fixed points below, which I omit at present, viz., the broad, round, and utero-sacral ligaments. Thus the uterus proper, cervix, and pelvic floor segments are all continuous. The uterine muscle passes into the cervix, the anterior lip of the cervix is attached to the postero-superior angle of the anterior segment of the pelvic floor, the posterior lip of the cervix to the upper and anterior portion of the sacral one. These segments of the pelvic floor differ in their attachment to the bones of the pelvis: the anterior one is loosely attached to the



pelvis, the sacral one firmly to the sacrum and coccyx. Lastly, on this head, note that the long axis of the uterus and that of the vagina are at right angles. The following is a short summary of the condition at the beginning of parturition:—

- (1.) Uterine muscle almost quiescent;
- (2.) Cervical canal  $1\frac{1}{2}$  inches long and anterior and posterior walls in contact;
- (3.) Segments of pelvic floor in apposition, anterior vaginal wall  $2\frac{1}{2}$  inches long, posterior vaginal wall  $3\frac{1}{2}$  inches long.

If the longitudinal unstriped muscle of the uterus shorten, *i.e.*, contract, it must pull on the cervix below and also on the segments of the pelvic floor, the resistance of the foetus lying between fundus and os internum keeping the fundus uteri from being depressed.

Now let us suppose that parturition has begun, and that the uterine muscle contracts. The circular fibres will squeeze the foetus all round and elongate it, the longitudinal ones will shorten, exert upward tension on the cervix and pelvic floor segments, and thus, having a fixed point below, must—

- (1.) Elongate the cervix,
- (2.) Pull its walls apart,
- (3.) Drive the foetus through it.

The cervix is further attached to the pelvic floor segments, and these, then, are subjected to an upward traction which pulls up the anterior segment, so that in this way the pelvic floor becomes opened up for the passage of the child's head. Now, if we look at an actual section of a woman who died during labour, we see exactly what takes place (Fig. 2).

Note therefore that—

- (1.) The cervix is elongated to about three times the length it had at the beginning of parturition, and expanded laterally and antero-posteriorly so much that we get a large tube resulting.

(2.) The segments of the pelvic floor are separated, and the vaginal walls far apart. All this, then, is the result of uterine action drawing up the structures into which its longitudinal muscular fibres pass, and driving the child through the distensible cervix and separable segments of the pelvic floor. So far, then, as we have gone, we can deduce one great fact, *viz.*, that “during parturition the uterus exerts upward tension on the cervix and on the segments of the pelvic floor.”

But I wish to give you some more exact anatomical detail on this matter, and, to make everything clear, I shall first use a very familiar illustration. Let us suppose that some one is standing before two folding doors; that one of the folding doors has a rope attached at its edge, the other a rope attached near the hinge, and that he has to push some object, say a big box, through them; he can do so best by laying hold of the ropes, one in each hand, putting

his foot against the box, and pushing down. The result would, of course, be that he pulled up the one door and drove the box against

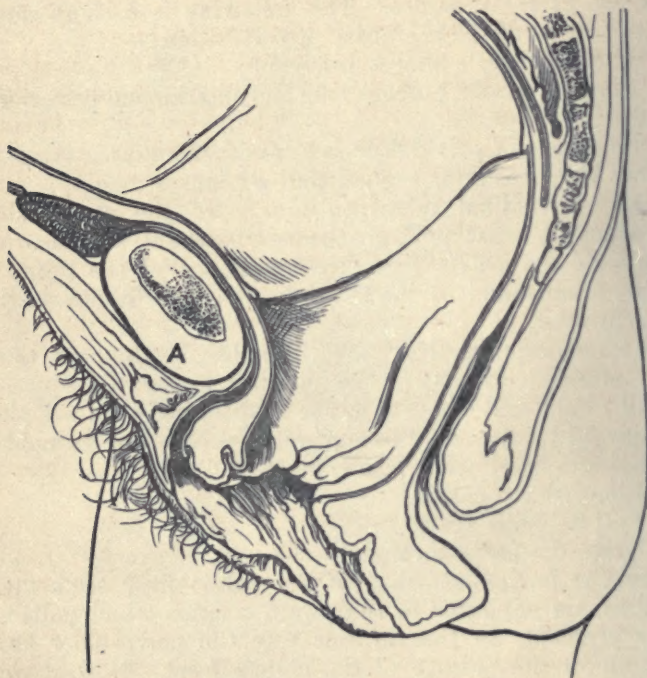


FIG. 2.—Pelvic floor during parturition (Braune).

the other, and thus pushed it through. But suppose that the one rope was double the thickness of the other, and that the latter finally ended in a single strand at the last one-third or so; then, if the box were too big for the doors, the ropes would be pulled on and pulled on till they snapped. Now, which would snap first? The answer is easy: the slender one, at its upper one-third.

Now let me apply this simile. As one sees from Figs. 1 and 2, the uterine muscle is attached to the cervix, and the cervix really to the vaginal walls. We can put this more precisely as follows:—The uterine muscle on the posterior aspect passes into the cervix; the cervix is attached to the top of the vaginal wall. This wall is thinnest at its upper inch: below this the anterior rectal wall strengthens it, and finally the peritoneal body makes up its powerful inferior part. The anterior uterine muscle passes into the cervix, and this into anterior vaginal wall, which is strengthened by the bladder and urethra so as to be very strong. Thus the structures on which the uterine muscle pulls vary in strength; the cervix and upper part of the posterior vaginal wall are weaker than the other portions of the vaginal wall. You will see at once, then, that where the uterine tension is too great the cervix or vagina will yield, the



part of the vagina yielding being the upper part of the posterior vaginal wall. This is what really happens,—the cervix tears more frequently than the vagina, and the upper part of the posterior vaginal wall is the seat of election for a vaginal tear.

These, however, are not the only factors. Thus the size of the head driven on, the existence of uterine obliquity, pendulous abdomen, and the fact that the cervix bears the stretching from the head first, must, in any given case, be taken into account. These I do not consider now. You will note specially one fact. The posterior vaginal wall is about  $3\frac{1}{2}$  inches long at the beginning of parturition. During parturition, however, it is elongated to about 5 inches (Fig. 2), while the anterior vaginal wall undergoes very little elongation (Fig. 2). This results from the fact that the head is driven down against the curved posterior vaginal wall, thus elongating it down, while the straight anterior vaginal is drawn up, and from its mere shape suffers no such elongation.

The posterior vaginal wall is, therefore, specially liable to tear, owing to its special structural anatomy and to the additional elongation it undergoes during parturition as compared with the anterior vaginal wall.

Now if any substance is subjected to stress, we have to note—

1. *The physical nature of the substance itself.* 2. *The nature of the stress it is subjected to.* These are elementary facts in physics, but have a valuable bearing here.

1. *The physical nature of the substance itself.*—This I take up in special relation to the vaginal walls, and consider the naked-eye anatomy and then the microscopic.

To the naked eye the vaginal walls can be seen to be transversely rugous, an arrangement allowing of the tensile elongation already alluded to. On transverse section the mucous membrane can be seen to be folded in at the sides (Plate I.), this evidently allowing of the eccentric dilatation by the head.

If microscopic sections of the vagina and neighbouring organs in a six months' be made, we can study all these relations with the naked eye or with a hand-glass (v. Plates I. and II.)

If now we examine microscopic sections under higher powers, we find the following structure:—

(1.) *T. S. of fetal pelvis (6 months) from pubic cartilage to anterior vaginal wall.*—Beginning on vaginal aspect, we find many layers of squamous epithelium covering connective tissue papillæ into which bloodvessels project. Outside this lies much fibrous tissue in distinct wavy bundles, and finally a layer of circular unstriped muscle, one of longitudinal, and, lastly, decussating fibrous tissue closely blending the urethra to the vaginal wall.

(2.) *L. S. of fetal pelvis from bladder mucous membrane to anterior vaginal wall.*—This shows the same structure as already described.

(3.) *T. S. section, showing side relations of vagina (Plate II.)*—We see here the connective tissue, with little, if any, unstriped muscle;

but the well-marked fibres of the levator ani, outside this, form a conspicuous feature in some sections, while in others we get the pubic arch.

The microscopical structure of the vagina is, therefore, that of a felted substance with strong bands of fibrous tissue and unstriped muscle running in the line of the tension exercised during labour, viz., parallel to the vaginal long axis and at right angles to it.

One additional point of interest comes out in these specimens, viz., that the anatomical fascia may be of two forms, viz., a firm sheet of fibrous tissue, as in the pelvic fascia, and a loose meshwork arrangement of connective tissue in that lying between rectum and vagina and bladder and vagina. The two are functionally contrasted, inasmuch as the one gives attachment to striped muscle, while the other is placed round rectum and bladder to allow of their contraction.

The vaginal walls are, therefore, peculiarly well fitted to stand strain when looked at from a merely mechanical aspect. We must, however, keep in mind that these tissues are vital, *i.e.*, in the intervals of stress they are fed by the abundant blood supply, and their strength and mechanical elasticity kept up.

2. In the second place we must consider the kind of stress to which they are subjected. As Dr James has clearly pointed out to us, we have to consider the amount of stress and the time it is applied. This means that a piece of string may be broken by a sudden tug, and resist a long-continued equable strain. Now, the stress to which the cervix and vaginal walls is subjected is neither of these. A uterine contraction begins gently, reaches a maximum, and dies away gently. Thus, in this respect, the cervix and vagina are subjected to as little stress as possible, and yet the driving on power is fairly effective.

Let me now sum up the whole problem before drawing any general conclusions.

I started with this statement, "The problem we have to consider is as follows:—During parturition certain tears of the uterus and vagina are known to occur: how do these happen?"

I showed that the uterine muscle normally pulled on the cervix and vaginal walls, that these had their special weak points, but were structurally very strong, and that the nature of the stress to which they were subjected was such as to minimize the risk of tear. If you consider the simile of the folding doors pulled open by ropes, and of the box too large to pass, you will at once see that in abnormal positions of the child (cross-births), great enlargement of its head, contracted pelvis, we get a condition of affairs where the uterus will spend its force in elongating the vagina and cervix, and will ultimately spontaneously tear there.

Tear of the vagina during parturition will happen at the top of the posterior vaginal wall, and usually be transverse.

The whole question may therefore be summed up as follows:—





# DR. WHITSON

ON THE

## OPERATIVE TREATMENT OF HARE-LIP.

Fig. I.

AA.—The way to do it



BB.—The way NOT to do it.

Fig. II.



Fig. III.



Fig. IV.



Fig. V.



Fig. VI.

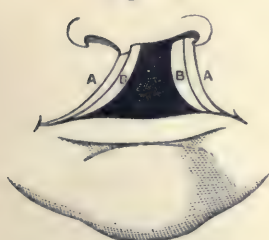
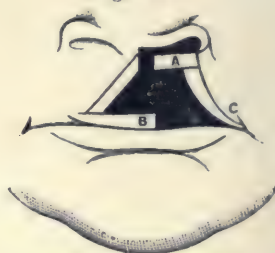


Fig. VII.



AA.—Lines of Incision  
BB.—Prolabium.

A.—Flap on upper aspect to be retained if necessary.  
B.—Flap brought down, to be carried along to point C.

(1.) During labour the uterine muscle exercises an upward tension on the cervix and pelvic floor segments.

(2.) The foetal head exercises a dilating power on the cervix and pelvic floor segments, this dilating force acting at right angles to the long axis of the cervix and vagina.

(3.) The vaginal walls are constructed so as to bear longitudinal tension and eccentric strain. This is provided by the rugæ and the felted structure of the vagina.

(4.) The anterior vaginal wall, from its close incorporation with the urethra and loose union with the bladder, is the strong wall.

(5.) The posterior vaginal wall is structurally weak at its upper half inch, is more elongated during labour than the anterior one, and therefore—

*Rupture of the vagina is most common where the posterior vaginal wall is covered by peritoneum, and when it occurs is a tension tear like cervical rupture.*

The precise conditions under which such a vaginal tear happens will vary with each case. The preponderance of the frequency of cervical over vaginal rupture is marked, and is due in part to the head entering the cervix first. Finally, it is evident that a knowledge of the force necessary to tear this part of the vaginal wall would give us a force under that necessary to complete a full-time labour.

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## II.—THE OPERATIVE TREATMENT OF HARE-LIP.

By JAMES WHITSON, M.D., F.F.P. and S.G., F.R.M.S.; Surgeon to the Dispensary of Anderson's College; late Extra Dispensary Surgeon, Glasgow Royal Infirmary.

*(Read before the Glasgow Royal Infirmary Medical Society, 17th March 1883.)*

MR PRESIDENT AND GENTLEMEN,—The congenital deformity of hare-lip is one which has at all times been of interest to the practical surgeon, not only from the nicety of the operation required for its removal, but from the fact that different ways of performing it have been recommended with the view of improving the result, and consequently obtaining the nearest approximation to the normal and healthy standard. Of the various methods which have from time to time been brought under review, each has had its advocates, who, in this as in other matters, have claimed for their own mode a distinct pre-eminence over the rest.

I do not in the present paper propose, nor would it be advisable, to lay down any definite or hard and fast rules in regard to the time best suited for operating. Such a period cannot be decided upon by any definitely recognised or universal law. It must be fixed by the surgeon in charge of the case, who ought to weigh thoroughly in his own mind the individual as well as the distinctive circumstances appertaining to, and therefore directly

bearing on each, and, having discussed these to the best of his judgment, act in accordance therewith. Some writers are in favour of a very early interference; others object to it, and prefer a later. For my own part I would counsel you, *ceteris paribus* to steer a middle course, as you all know it is advisable to avoid extremes. There may be drawbacks to an operation during the first six weeks of life, but these are more than counterbalanced by the advantages which follow in its wake. The chief factor we must consider is the state of the general health. If this be good, what possible objections can there be to the prompt adoption of remedial measures? In my opinion, none, and I would urge you, gentlemen, not to let a favourable opportunity slip, for if once gone it may not be easily recalled, or only after a lengthened interval. The parts immediately involved are then in a tolerably plastic condition, the patient is comparatively easy to manage—or perhaps it would be more correct to say, less capable of offering resistance than when older—and, beyond a doubt, delay, with its many troublesome sequelæ, is in this way often productive of harm. A case was brought to me during the course of last summer by my friend Mr John M. Davidson, where the child was one month old, and its general condition extremely suitable for operating. The parents, however, demurred, and under these circumstances nothing was then done. Two months afterwards I was asked to undertake the conduct of the case. I now found the patient much reduced in strength, but proceeded to do my best for the relief of the malformation, as it was evident that if we waited longer the probabilities of cure would, so far from increasing, almost certainly diminish. The result was fairly good, and you will shortly have an opportunity of judging of this; but I venture to say that the early operation would have been attended with more success, and a greater amount of individual benefit as well as after satisfaction would have accrued to all concerned.

Where the hare-lip is complicated with cleft palate, the early removal of the former is one of the greatest adjuvants towards the future and successful treatment of the latter, inasmuch as the steady compression of the united lips exercises a wonderful effect in approximating the edges of the fissure towards one another. As strongly illustrative of this, mention is made by Dr Wheeler,<sup>1</sup> the well-known Dublin surgeon, of an instance where the mesial lines of the palate were so widely apart that the mother could pass her fingers between them, but in three years after the junction of the lips had been effected they would only admit the edges of a sheet of paper. Mr Butcher<sup>2</sup> also refers to the same thing, and

<sup>1</sup> "On the Operative Treatment of Hare-Lip," by W. J. Wheeler, M.D., *Dublin Journal of Medical Science*, January 1880, p. 29.

<sup>2</sup> *Essays and Reports on Operative and Conservative Surgery*, by Richard G. Butcher, p. 655.



points out that, by the gradual closure in this way of fissures in the palate, bad habits of speech are for the most part averted, or at least greatly ameliorated.

Should you be called upon to treat a child who is losing flesh by the milk running out of the nose, then it is your clear duty to take immediate steps for the correction of the defect, and delay only diminishes the chance of a primary union, because the patient is gradually growing thinner, and steadily but surely becoming less able to withstand any shock to, or cope with any strain on, the system. On this point all writers of any standing are agreed, and the statement can easily be confirmed by a reference to the best works on the subject.

Some surgeons would not touch a case till the patient was several years of age. Well, gentlemen, do not follow their example. Little good is served by it, nor can a course like this be productive of benefit in any degree commensurate with such prolonged delay. No doubt it may be said with perfect fairness that there is one advantage due to age which is certainly present when operating in these advanced cases,—the increased thickness of the labia; consequently there are broader surfaces to appose, and breadth, as you are aware, not only gives, but adds to the stability of every structure. Against this, however, it may be urged that by the time a few years have elapsed the lips are certain to have lost much of their pristine plasticity, and to have acquired decided habits as well as expressions peculiarly their own,—both difficult of eradication,—while the patient is possessed of considerable physical energy combined with no little strength of will, and is only too capable of struggling when it is essential for his future welfare that he should not do so. In addition to all this, it is easy to see that, when operated on in an early stage, the mere fact of the parts having been assigned their respective loci and distinctive spheres of action will tend to assist in the restoration of the natural appearance, as well as to facilitate the subsequent moulding of the labial outline to the desired standard.

We have here to-day for your inspection a patient who was nearly three years old before being operated on, and whose case you will find narrated in a paper<sup>1</sup> I wrote some time ago on the subject. We gave this boy suitable doses of laudanum during the first ninety-six hours, with the view of keeping him under the influence of opium in order that he might not get his hands at the sutures. From his size and strength he would certainly have played mischief had he managed to do so, a contingency to be guarded against by every means in your power.

It is beyond the scope of the present paper to discuss seriatim the different methods of procedure which have from time to time been devised for the cure of hare-lip, and I now propose to give you a few useful hints in regard to the operation generally, which,

<sup>1</sup> Case of J. S., *Medical Times and Gazette*, 3rd June 1882, p. 578.

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if acted upon, will, I trust, prove beneficial, ever bearing in mind the important fact that certain circumstances, taken in conjunction with individual peculiarities, alter the aspect of particular cases and have an independent influence over them.

Our first duty, before proceeding to operate in a case of hare-lip, is to envelop the child in a large towel, in order to prevent any movement of the arms. This having been accomplished, we next proceed to free the lip from the gums, the thorough performance of which is of the utmost consequence, and should be carefully attended to, in order that the apposing surfaces may come easily together. In doing this, gentlemen, I would recommend you to use a small knife. It is quite as effectual as a larger one, and adapts itself more readily to the hand, as well as to the confined and cramped area in which we are here compelled to work. The edge of the blade should be directed towards the upper maxilla, and away from the lip itself. In this way the greatest amount of tissue is conceded to the latter, so that its thickness and consequent vascularity are unimpaired, while hæmorrhage is, by conformity to this rule, almost *nil*. If there be any projection of the intermaxillary bones which it is impossible to utilize, it must be removed; but for the patient's sake it is advisable to take away as little as is compatible with the satisfactory reduction of the malar displacement. Few speak more forcibly on this point than the late Dr Maurice Collis<sup>1</sup> of Dublin. Doubtless it is comparatively easy to snip off any undue prominence in connexion with the upper jaw,<sup>2</sup> but it is well to remember that by so doing we deprive the soft parts, to a greater or lesser extent, of their natural support, that empty spaces are not easily filled, and that teeth once sacrificed can never be replaced. A little time and pains, as well as conservative skill, may therefore be ungrudgingly bestowed here, not only for the credit of the profession, but for the patient's future comfort and improved powers of articulation. In some instances the dislocated portions may be forced into favourable position and wired together. When this can be done, it is well to carry it into practice.<sup>3</sup> The younger the child the more easily will it be managed—a convincing argument for the adoption of early remedial measures.

What may be called the third and most important step in the operation is the cutting of the flaps; but before attempting their scission it is a good plan to apply a suitable pair of clamps for the prevention of hæmorrhage during this stage and throughout the subsequent process of suturing the newly freshened surfaces.

<sup>1</sup> "The Æsthetic Treatment of Hare-Lip, with a Description of a New Operation for the more scientific Remedy of this Deformity," by Maurice H. Collis, M.D., *Dublin Journal of Medical Science*, vol. xlv. p. 298.

<sup>2</sup> Mr Wheeler's forceps are very well adapted, from their peculiar shape, for removing any projection of the malar bones.

<sup>3</sup> Mr Butcher has devised several instruments for partial section of the bones. See his work, *On Operative and Conservative Surgery*, p. 715.



I will now pass round one or two specimens of these, and you can judge for yourselves which are the best to work with. Mr Thomas Smith gives a sketch of a pair in an old number of the *Lancet*,<sup>1</sup> but they appear to have two defects. The first is that they exercise far more pressure than is requisite for the complete command of the coronary vessels, with no means of graduating it; and the second is that from their shape they interfere with the free play of the surgeon's hand

Another pair<sup>2</sup> are too heavy, and are apt to be a hindrance from their bulk. Here are a pair of clamps which Messrs Maw, Sons, & Thompson, the eminent instrument-makers of 7 Aldersgate Street, London, made for me last year. I have found them, from repeated trials, to be admirably adapted for attaining the end we have in view (Fig. VIII.) They are light and handy, while, owing to their construction, they are, when in use, completely out of the way, and do not impede the operator in the slightest. No more compression than is absolutely necessary—a principle of cardinal importance—is applied by means of the screw (C) through the medium of the blades (A and B).



FIG. VIII.—Hare-lip Clamps (Author's).

In order to facilitate the proper performance of flap section, you will find it advisable (the clamps being accurately fixed) to make use of two pairs of fine artery forceps, one being placed at the nasal, while the other grasps the lower extremity of the fissure. In this way the labia can be put lightly on the stretch, which renders the requisite incising easier, cleaner, and neater. It is the general custom to pare the edges with a knife; but there are many, including Dr Wheeler,<sup>3</sup> Mr Butcher,<sup>4</sup> and M. Malgaigne,<sup>5</sup> who advocate the use of scissors specially devised for the purpose, and

<sup>1</sup> "Clinical Papers on the Surgery of Childhood," by Thomas Smith, F.R.C.S., *Lancet*, 28th Dec. 1867, p. 797.

<sup>2</sup> Messrs Maw, Sons, & Thomson's Book of Illustrations for 1882, p. 122, Fig. 100. Mr Smith's instruments just referred to are depicted on the same page, figs. 98 and 99.

<sup>3</sup> *Dublin Journal of Medical Science*, January 1880, p. 40.

<sup>4</sup> *Essays and Reports on Operative and Conservative Surgery*, by Richard G. Butcher, p. 658.

<sup>5</sup> *Ibid.*, p. 668.

who claim for these a superiority over other instruments. Certainly the results of Dr Wheeler's cases, as shown in his paper just alluded to, are excellent, and to all appearance the end amply justifies the means. I now beg to hand round for your inspection the various appliances<sup>1</sup> used by him in the cure of hare-lip. The scissors are of two kinds, straight and curved, the latter being beautifully designed for the execution of a concave incision. By the kind permission of Dr Wheeler, I am now enabled to give woodcuts of both.

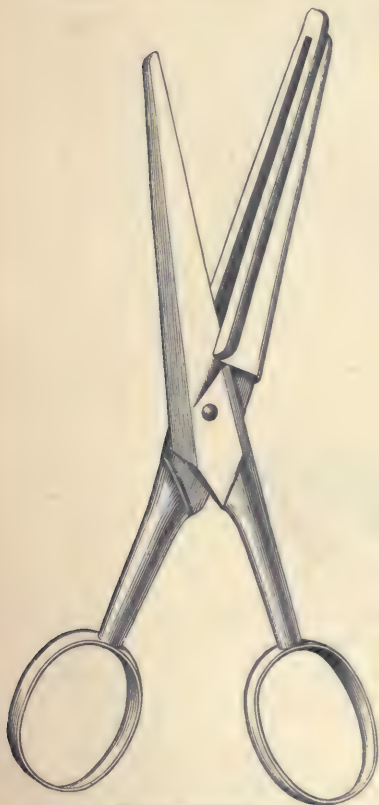


FIG. IX.—Straight.



FIG. X.—Curved (open).



FIG. XI.—Curved (closed, showing concavity).

The curved are made for both sides. The specimen shown is for the right side of the cleft.

Mr Thomas Smith speaks highly of scissors,<sup>2</sup> and suggests that, before denuding the edges, the centre of each margin of the cleft

<sup>1</sup> My best thanks are due to Mr D. E. Corcoran, instrument-maker, Dublin, for the excellent specimens of these with which he has supplied me.

<sup>2</sup> "Clinical Papers on the Surgery of Childhood," by Thomas Smith, F.R.C.S., *Lancet*, 28th December 1867, p. 797.

should be forcibly drawn out by means of a pair of artery forceps, with the view of imparting a concave aspect, (); but the curved scissors of Dr Wheeler effect this without straining or pulling on the labia—always an undesirable object at this juncture, because of our inability, under such circumstances, to gauge accurately the amount of tissue to be removed. If you use a knife, a sharp tenotomy one is as good as any. It should be made to transfix the entire thickness of the lip close to the nose, and be carried gradually downward as far as is considered necessary, when it can be reversed, and, if so wished, the flap disconnected on its upper aspect. In the performance of this, gentlemen, I cannot too strongly inculcate on you the necessity of removing a good slice of tissue, and avoiding the mistake, which nearly all beginners make, of timidly running the knife down by the junction of the red margin. In Fig. I. (frontispiece) I have endeavoured to lay special stress on this point, by portraying in red (lines B, B) the route too often pursued, but which ought to be carefully guarded against, in cutting the flaps. On every occasion keep the important axiom prominently before you, that it is better to take too much than too little; and if you are not afraid to go widely clear of the prolabial edges of the fissure (lines A, A, Fig. I.) your result will assuredly be better, looked at from every point of view, operatively, relatively, and prospectively. There are, by these means, broader surfaces to bring together, which admit of a facile and accurate apposition. The chances of permanent union are augmented, because there are a greater number of vascular points capable of throwing out branching loops with their fellows of the opposite side,—a most desirable object, because of the certain maintenance of vitality between the contiguous sides which must accrue from the establishment of a collateral circulation. The sutures obtain a better grasp of the structures through which they pass, and, from the stable nature of the parts in question consequent upon their breadth, there is little likelihood of any after displacement taking place. The vertical depth of the lip is also greater where a broad margin has been removed, and therefore there is less fear of the dreaded notch showing itself by-and-by. This point is clearly brought out by referring to the dotted red line running between the points B and A in Fig. I. In our incisions, if we adhere to the course of the black lines A, A, we shall, in all probability, be gratified with securing a near approach to the desired standard (Fig. II.), because the two points A, A, are on a distinctly lower level than those of B, B. The corollary follows, that if we select the lines leading to the former (A, A), we must obtain the greatest possible length of lip, and, with ordinary precautions in the subsequent apposition of the cut surfaces, a notch is impossible. On the other hand, if we traverse the tracks of the red lines (B, B), the furrow cannot fail to become apparent from the marked slope which prevails along the prolabial edges from B to A, as illustrated



by means of the dotted red line; and though we availed ourselves of the parings, it would still exist, for the reason just stated (*vide* Fig. III.) A reference to the last figure will show that the upper and under lips cannot meet on account of the triangular space present between them, and which is certain to interfere with the pronunciation of the labial sounds, more especially of such letters as *b* and *p*. The unsightly vertical dip is also avoided, because the parts on either side of the black lines (A, A, Fig. I.) are of uniform thickness and more likely to present a smooth after outline than when the labial depth, viewed antero-posteriorly, gradually increases towards the angle of the jaw, as it must do when the knife or other cutting medium has closely embraced the line of the red margin (B, B, Fig. I.)

Having cut, but not severed, your flaps, the problem for us to solve is, How are we to dispose of them? Are they to be detached *in toto*, or is it advantageous to retain them; and if we choose the latter alternative, what particular method are we to adopt of utilizing them? Well, gentlemen, though the subject has given rise to keen controversy, I would counsel you not to throw away the parings, but to turn them to account, thus rendering them subsidiary to the general weal. This view is strongly supported by Dr Maurice Collis in a very able article,<sup>1</sup> published some years ago.

The particular form of the operation (Fig. IV.), of which Malgaigne<sup>2</sup> in France and Samuel Smith<sup>3</sup> in England were the leading exponents, consists in turning down both flaps (A, A, Fig. IV.), uniting their cut surfaces to one another, and docking any redundancy with the scissors. One objection to the foregoing *modus operandi* is, that, when completed, this pendent tongue must be liable to constant movement, owing to contact with the under lip (*see* Fig. V.) A second is, that the spoon with which the child is fed is apt to push the pedicle either to one side or the other, and the milk is inclined to penetrate between its walls.<sup>4</sup>

A better plan than the latter (*vide* Fig. VI.), and one which, in my opinion, gives a finer as well as more graceful finish, is to bring down a good thick flap from one side (B, Fig. VII.), carry it along and unite it by a species of half mortise to the lower border of the other (C, Fig. VII.), the addition of which imparts an even and natural appearance, counteracting the tendency towards the

<sup>1</sup> *Dublin Journal of Medical Science*, May 1868, vol. xlv. p. 294.

<sup>2</sup> See Mr Francis Mason's work on Hare-Lip and Cleft Palate, p. 37.

<sup>3</sup> Mr Smith practised in Leeds. An obituary notice of this surgeon will be found in the *Lancet* of 14th Dec. 1867, p. 752.

<sup>4</sup> To be avoided in great measure by the use of collodion. As a general rule, the stitches holding the prolabium together should be removed a day or two after the others. If gaping takes place between the pedicular surfaces, it is not only difficult to remedy, but it has an injurious effect on the main line of union.

formation of a notch.<sup>1</sup> In this way the vitality of the cicatricial surfaces is augmented, and the prospects of their union by first intention are thereby considerably strengthened.

My best thanks are due to Mr Francis Mason and Mr Thomas Smith, the eminent metropolitan surgeons, for their courteous permission to make use of several woodcuts illustrating their writings on this subject.

We will now suppose the flaps cut and ready for allocation to their respective sites. The next question, therefore, comes to be, What kind of suture shall we call into requisition for the approximation of the recently pruned edges? The metallic, consisting for the major part of silver wire, chromicised catgut, horse-hair, silk, the bead or quilled,<sup>2</sup> and the hare-lip needle, have all been tried and advocated. I would advise you to give a preference to either of the first two. Silver wire,<sup>3</sup> though not without drawbacks, makes an excellent suture, and a tolerably thick thread should be selected. It is less liable to cut when not too fine, it fulfils its mission better, and forms a fast knot, the ends of which should be laid flat in order to lessen their chance of catching. Chromicised catgut acts beautifully and needs no further care. It possesses an inherent adaptability which wire, however ductile, can never acquire. Horse-hair,<sup>4</sup> though by no means destitute of advantages, is not to be specially lauded. Owing to its fineness, it is somewhat prone to cut if subjected to any strain; the pliancy of gut is wanting, and, unless care be taken in its ligation, it is almost certain to be laxly done and thus slip. On the other hand, no stitch is more easily withdrawn, and, unless forced by tension to eat its way towards the exterior, little trace of its presence can be afterwards seen. I have found silk best suited for approximating the probabium, and in this capacity you will find it handier than hair. The needles were at one time universally approved of, but they have to a great extent been discarded by most surgeons. They leave a mark necessarily enlarged by tension and in proportion to the length of time they are allowed to remain *in situ*. The compression exercised by them is apt to trespass upon the vitality of the neighbouring parts, while the thread which is wound round them conceals the lips, becoming, when soaked with blood, a stiff and unyielding mass.

Should you be forced in an emergency to try the needles, you will find it convenient, after having placed them in position, to appose the raw surfaces before putting on the silk; and the latter ought to be of a coarse kind in order to spread the area of pressure

<sup>1</sup> Mr Butcher's work on Surgery, p. 668.

<sup>2</sup> Recommended by Mr Brooke, *Lancet*, 21st May 1859, p. 509.

<sup>3</sup> Used by MM. Giralde's and Verneuil. For further particulars of the views held by these gentlemen on this suture, see *Medical Times and Gazette*, 27th August 1864, p. 226.

<sup>4</sup> A continuous suture of horse-hair clamped with a shot at either end is recommended by Mr Thomas Smith, *Lancet*, 28th Dec. 1867, p. 798.



and minimize ulceration. It is needful to withdraw the pins at the end of forty-eight or seventy-two hours, certainly, at the latest, on the fourth day, which procedure alone bears strong testimony in favour of their rejection, because union is at this time by no means firm, and any untoward movement may react prejudicially. Under these circumstances it is desirable, so long as cohesion is progressing between the labiæ, to have a class of sutures at our command which will enable us to keep the parts at rest and evade taxing the elasticity of the commissure. Furthermore, two needles cannot divide the strain so equably, or afford the relative support of three stitches of wire or gut.

In passing the sutures, a curved needle is the best to work with. It is preferable to a straight one, because it adapts itself more readily to the natural conformation of the parts, and it should be made to penetrate the entire thickness of the lip, with the exception of the mucous membrane.

In its manipulation a needle-holder<sup>1</sup> will assist you greatly. The needle of Lister, with a groove above the eye, into which the suture is designed to sink, is the most convenient for this purpose.



FIG. XII.—Showing old mode of threading needle with projection at eye.



FIG. XIII.—Lister's needle threaded. Suture compressed into groove above eye.

Fig. XII. exemplifies forcibly the imperfection attaching itself to the old way, while in Fig. XIII. we have a good illustration of the method which it is obviously advantageous to pursue. You will observe that by this little manœuvre (Fig. XIII.) there is no impediment to the onward passage of the needle, a matter of paramount value, because it lessens the aperture which must be made in the tissues, and at the same time conduces to the tractive power of the sutures after these are made fast. The tearing of the doubled wire about the eye of a needle often causes a laceration instead of a puncture, and a minute rent is sure to widen still further when the stitches are tightened.<sup>2</sup>

<sup>1</sup> The simpler the better. Complicated instruments are to be avoided, from their liability to go wrong, and from the length of time occupied in their frequent readjustment. Those which grasp the needle at right angles are to be preferred to those which seize it lengthways.

<sup>2</sup> The truth of this can be demonstrated by punching a hole in either paper or cloth, when it will be found that a cleanly cut aperture possesses a vastly increased power of resistance as compared with a ragged or torn one.



The cannulated needle of Dr M'Lellan of Philadelphia might be tried, and of which, through the kindness of that gentleman, I am now able to show you a specimen.

The inventor claims that the handle offers firm support to the fingers of the operator, while great accuracy in the introduction of the sutures and complete exactness in the apposition of the parts are attained.<sup>1</sup>

The highest or nasal suture is usually passed first, and no pains should be spared to see that it fulfils its function efficiently, for if there be any relaxation here the lip has in consequence an inclination to be drawn upwards. The second is placed at the opposite extremity, and one or two follow between these. The sutures may with advantage be inserted from alternate sides. In this way the balance of the lips is more equally sustained. Lastly, a sufficient number of threads of fine silk<sup>2</sup> can be set aside for the prolabium. The sutures should not finally be secured till all are in their proper places, and care must be taken to see that the line of union reveals a fair and smooth outline. At this juncture you will find the clamps invaluable, for by their co-operation it is easy to perceive whether everything is on the same plane, and, if not, very little trouble will soon create a change for the better. In many cases of hare-lip a thick cord is visible running down the commissure. This arises from the inaccurate disposition of the labial margins, one being allowed to remain at a higher level than the other.

FIG. XIV. — Dr M'Lellan's cannulated needle,  $\frac{3}{4}$  size.

Many are in the habit of using a strip of plaster, extending from one cheek right round to the other, to relieve tension. It certainly does so, but it soon becomes soiled from the milk with which the child is fed, and the skin, in consequence, in the neighbourhood, becomes excoriated. I have frequently tried plaster, but have obtained excellent results without it. The late Dr James G. Lyon,<sup>3</sup>

<sup>1</sup> A useful instrument of this kind is also made by H. Galante & Fils, 2 Rue de l'Ecole de Medecine, Paris. *Vide Catalogue Illustré des Instruments et Appareils de Chirurgie de H. Galante & Fils*, p. 84, fig. 237.

<sup>2</sup> Mr Snowden, instrument-maker, Philadelphia, has recently supplied me with beautiful specimens of iron-dyed silk. These he manufactures in fourteen different sizes, and it frequently saves confusion in operations such as this, more especially in that of cleft palate, to work with threads of different colours. It is not unlikely that the hæmostatic properties of the iron may in great measure be communicated to the silk, and thus render it of double service. It might be tried, for example, in the strangulation of nævi, and would certainly be a more elegant method of procedure than the one proposed by Mr Erichsen of staining one-half of the ligature with ink in order to distinguish it from the other. See *Science and Art of Surgery* (1869), by J. E. Erichsen, vol. i. p. 652.

<sup>3</sup> Died, to the regret of all his friends, 6th January 1883.

a surgeon gifted with rare taste and the highest manipulative skill, held the opinion that, so far from serving a useful purpose, plaster had a reverse tendency. Hainsby's truss,<sup>1</sup> which I now show you, has all the advantages of plaster with none of its drawbacks. It may with benefit be worn for some time before operating.

Some surgeons are in the habit of keeping the patient under the influence of opium during the progress of resolution, and the practice is well worthy of an extended trial, though care must certainly be exercised in the exhibition of such an agent. Mr Butcher<sup>2</sup> commends the custom, and illustrates by numerous cases the efficacy of this drug in partially narcotizing the child; but it ought always to be borne in mind that it is of immense assistance during the performance of operations generally, and strengthens in a remarkable degree the power of chloroform or ether, if an opiate<sup>3</sup> is given shortly before their inhalation is commenced. The patient, under this line of treatment, becomes peculiarly susceptible to the action of an anæsthetic, and at the same time remains long as well as deeply under its sway<sup>4</sup>—a point of extreme practical value, for it permits the surgeon to proceed through the operation with less interruption than when the effect of the chloroform is constantly passing off, thus demanding its fresh administration, and entailing, as a matter of course, until unconsciousness is reproduced, a complete cessation in the onward proceedings.

Operations about the mouth have always been tedious from this cause, and any method which renders them less so is one which ought to be cultivated.<sup>5</sup>

In removing the stitches<sup>6</sup> you will find it expedient to put the patient under chloroform. By its aid muscular resistance is overcome, and you can thus attain your object without endangering

<sup>1</sup> Care must be taken to see that it fits accurately.

<sup>2</sup> *Essays and Reports on Operative and Conservative Surgery*, by Richard G. Butcher, p. 712.

<sup>3</sup> In adults this is best given hypodermically, and for two reasons. A less dose suffices (from  $\frac{1}{4}$  to  $\frac{1}{8}$  grain), and it acts on the system more quickly than when taken by the mouth. The tartrate of morphia is more suitable than the acetate for subcutaneous injection, as it is soluble in water. Atropine ( $\frac{1}{100}$  grain) may with benefit be added to the morphia.

<sup>4</sup> Opium possesses, in addition to its narcotic properties, a stimulating effect on the heart, thus counteracting the vascular depression usually caused by the inhalation of chloroform.

<sup>5</sup> Dr William Macewen obviates this difficulty in adults by administering chloroform continuously through tracheal tubes introduced by the mouth. These were specially designed by himself to meet exigencies of this description, and possess at the same time the additional advantage of preventing blood from getting into the respiratory tract. To pass these neatly, however, considerable practice is necessary, and, from the confined area and want of room generally which confronts us here, I fear that this method, valuable though it be, is mechanically impracticable in young children. Dr Macewen has tried it successfully in cleft palate, but the space at our command is much greater there than in hare-lip.

<sup>6</sup> Sutures of wire may be withdrawn about the fifth day. Dr Lyon advocated their being left in even longer.



the safety of the recent union. Should you find, either before or when withdrawing the sutures, that any portions of the cut surfaces have failed to become adherent, do not interfere so far as operative measures are concerned, but postpone the rectifying of the defect till afterwards.<sup>1</sup> I have on more than one occasion seen attempts to close small apertures resulting in the separation of the whole newly united tract—an unpleasant consummation, for although the lips are successfully re-apposed, the result can never rank with one in which primary coalition has been secured.

Gentlemen, let me say, in conclusion, that I have no wish to adduce the three cases now before you as triumphs of surgical skill. Very much the contrary, for I would like you to appreciate the mistakes inadvertently committed, and which I have endeavoured to point out clearly and succinctly. When you come to be practitioners you will learn the propriety of not undertaking an operation rashly or hastily. Ponder well before proceeding with it, and when you definitely resolve to carry out your intention set about it in a deliberate and thoroughly well-planned way. If resolution does not progress in an equal ratio with your expectations, do not despair though matters at first sight seem to be discouraging. It is marvellous what can be accomplished by care and application; and even the worst and most unpromising of cases will in the end turn out wonderfully well if they are closely watched and zealously attended to.

Never forget that it is mainly by contrasting our errors, from a comprehensive and elevated standpoint, with the improving light shed by future experience that we can ever hope to rise to eminence or achieve distinction in any sphere of life.

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### III.—EARLY HISTORY OF THE OPIUM TRADE.<sup>2</sup>

By JOSEPH EDKINS, D.D., of Peking.

OPIUM is at once the best of all medicines and the most deleterious of all narcotics. There is no drug in all the pharmacopœia which is at once so much feared for its bad effects and so much loved for its agreeable visions. Used carefully as by the judicious physician, it is of untold value, but it has become the cause of incalculable mischief to China.

It has become so pernicious to the Chinese people because of its insidious nature and the firm and irresistible grasp with which it seizes upon its incautious victims. They resort to the opium pipe

<sup>1</sup> Hainsby's truss might here be made useful.

<sup>2</sup> *China Returns of Trade for the Year 1881. Letter of the Rev. G. John on the Opium Traffic.* KEMPFER. — *Amœnitates Exoticæ.* SPRENGEL. — *Geschichte Arzneikunde.*



to be relieved when in pain, and the result is that they are soothed, but the sense of relief which is experienced is of the nature of a temptation to return to it again. It is felt to be the scourge of the country, because those who serve the state have proved to be specially open to be drawn into the snare of opium-smoking. On this account some of the most sternly upright of native statesmen in modern times have urged the emperors, in memorials expressly addressed to them on this subject, to stop the native cultivation by prohibitive decrees. Among them was Tso Tsung Tang, the able and successful administrator to whom was committed the delicate and difficult duty of reconquering revolted Turkestan. There is no room to doubt the patriotism of such men as this viceroy, and he and other lovers of their country leave no uncertainty possible in judging of their opinions on this question. They are uncompromising enemies of opium.

Sets of drawings, in a series of eight or twelve, are circulated, descriptive of the course of events in the life of opium-smokers. The first picture represents a youth in a rich family, surrounded by those things which conduce to a sense of luxurious ease. On a soft couch reclines the young beginner in the wretched career of an opium-smoker. The next scene shows the indignant father rebuking his disobedient son. His aged mother, leaning on a staff, looks on him sadly. He neglects his books, the study of which would open for him the path to honour and a useful life. While he reclines near the opium lamp a voice accompanies a guitar in a manner adapted to awaken pleased emotions in his heart. Then he is seen selling his ancestral property for a little money wherewith to pay heavy but unnecessary debts. His wife and little boy are then pictured coming tearfully to beg him to reform. He pays them no heed. Hostile intruders now appear, with a long staff and a knife, to take vengeance on him and on the opium-smoking lamp and other gear, which lie broken on the floor. In the next scene he is drawn as a wretched object, reduced by hunger and exhaustion. The ornaments of a rich man's home have disappeared. A shrunk-up figure, he sits in dejected poverty, upbraided by his wife and child. Living in a broken-down shed, he is still visited by debtors clamouring for payment. At last he is drawn as a beggar wandering beside trees and streams, without a home. The last scene does not represent him as dead, but as a miserable figure consisting of bones without flesh, his clothing reduced to two or three rags.

Such are the social effects of opium-smoking as described by native artists. Sets of such pictures are on sale at the present time in Canton and in Peking. They indicate a popular state of feeling, according to which there is nothing so dangerous and destructive as the habit of opium-smoking. These are the warnings drawn with the painter's art, at the call of the wise and experienced, to be pondered by the young men of rich families. The

victim of this vice is represented to them as descending by swift steps from the top to the bottom of the social scale. He is pursued by an unseen fate from one state of wretchedness to another, till he falls into destitution, and still does not die. A wretched life such as that of the opium-smoker is often prolonged beyond expectation, and so this form of misery is not unfamiliar in China. It leaves its traces unmistakable on the countenance. Most smokers carry the evidence in their faces, and if they wished to deny the fact it is useless for them to do so. This habit produces decided effects, not only on the physical features, but on the moral character. Harm is entailed on both. The smoker injures his digestive powers, and assimilates less food. He also develops weakness of will, a despairing feeling, and a spirit of indifference to matters which ought to interest him. He lies without remorse, and, as the artist truly depicts him, he is surprisingly indifferent to the distress that he causes to his parents, wife, and children. While all vice has a tendency to blunt the sensitiveness of the moral nature, this is specially true of the opium-smoker, who may be taken as a sort of type of that class of persons whose moral perceptions have lost their vividness in great part through the physical effects of opium. The social position of the opium-smoker is decidedly lowered by the habit in which he indulges, so that he enjoys far less respect and honour in the society to which he belongs than would otherwise fall to his lot.

It is to the German traveller Kämpfer that we owe the first faithful picture of the effects of opium on the easily-tempted and luxury-loving people of the East. He was a physician and a skilled botanist, a man of intellectual cultivation and moral sensibilities, consequently he was well fitted to make good use of his opportunities as a traveller. If a man is destitute of sympathy, he may amuse, but he will not instruct, when he describes the strange customs of the races among whom he travels; and being a man of frivolous aims, he gives an utterly inadequate and misleading account of new peoples and their ways of acting. To this moral sympathy Kämpfer added an insatiable interest in natural history, the social condition of races, their religions, and their politics. In 1683 he left Stockholm as secretary to an embassy sent by Charles XI. of Sweden to the Court of Persia. Here he stayed two years, and during this time he made a special study of bezoar, opium, assafoetida, and other natural products of that country, which were then and had been long before articles of trade with China. He went from Persia to India and Java, afterwards he visited Siam, Cochin-China, and China, on his way to Japan. When he had remained in that island-empire two years, he returned to Europe in 1693.

He describes the narcotics which he found in use in Persia, especially tobacco, opium, and hemp. He says of opium, that while, among Europeans, to administer more than a grain or a few



grains would be a deadly crime, the natives of the East are so accustomed to it by long habit that many persons swallow a dram without suffering (immediate) harm. Many evils spring from this abuse of opium in the end, if its use is long continued. "The body is emaciated, the strength is relaxed, the spirits are saddened, the intellect is dulled, so that you may see the victims of opium, sleepy and heavy in appearance, like trunks of trees, or sitting at feasts as if they were without tongues. Often have such persons been brought to me to be cured of this insane appetite for opium, a fee being promised of 100 pieces of gold if only I would rid them of this loss and waste of life and reinstate them in health. It is not necessary that I should adduce examples of such slaves of a bad habit, since the books of writers on medicine are full of them."

He speaks, a few pages farther on, in the work *Amœnitates Exoticae*, from which this account is translated, of an execrable misuse of opium among the black islanders of the Eastern Archipelago. It is employed to give them ferocity, so that they may commit murder boldly. Such persons, weary of life or of the insults they have to bear, devote themselves to certain death while taking revenge and inflicting death on others. To accomplish this purpose they swallow a pill of opium, which exasperates them and renders them bereft of reason and uncontrollable to such an extent that with a drawn sword they rush into a public place, ready, with the fierceness of a tiger, to kill any one, friend or foe, whom they may meet, until they fall lifeless on being run through by some one in defence of his own life. This action is called Hamuk, and is to be seen among the natives of Java and other parts of the far East. Every one shudders when he hears this word spoken, for those who see the homicide in the midst of his career all call out Hamuk, as a warning to those who are without arms that they may escape for their lives, and that whoever is bold and has weapons may assault this wild beast and destroy him.

Kæmpfer, in these passages, describes two of the prominent effects of opium. The physical exhaustion and unfitness for activity which in former years was noticed by the Protestant missionaries and others among Chinese opium-smokers is still found, but not to the same extent. The appearance of the people has been somewhat bettered of late, perhaps by less purity in the drug, and by the mixture in it of other elements. But at least the same general impression was produced on Kæmpfer's eye when the consumers of opium pills came before him, imploring his medical assistance, in Persia, as when, in these days, opium-smokers visit the hospital of the missionary physicians in China with the same prayer. Two centuries ago, in Persia, the inherent danger attendant on the habit of taking opium was plain to an intelligent traveller mixing with the people, and all China knows it now from seeing the result daily repeated in all cities and large towns, and in many parts of the country in the villages, also.



The other effect mentioned, the strengthening of the faculties for deeds of violence, is a sort of suicide. It is said that in China sometimes soldiers, as a preparation for taking a fortress or proceeding on some expedition requiring desperate courage, previously dose themselves well with opium; but it is not approved by Chinese officers in charge of troops. Where discipline is maintained, opium is carefully kept out of the reach of soldiers, and some officers have been executed for breaking the military laws and encouraging the sale of opium among the men in encampments. The tone of opinion on this matter may be understood from the way in which Tseng Kwo Fan, the father of the present Chinese ambassador to England and France, speaks upon it in his biography. In that biography of sixteen volumes two are occupied with papers on military affairs written by this eminent statesman. He says on opium-smoking that the harm it does to camp discipline is greater than is caused by any other thing. It must be swept clean away. No idea of tolerating it must be entertained. In the early morning the roll must be called. This may be finished by six o'clock or seven. After this, every morning, there must be either inspection of camp, or calling of names, or drill practice. Only to inspect is not enough. He also says, in prohibiting opium-smoking, kindness must be mingled with firmness, but the aim must only be the entire abolition of opium-smoking. The result will be that the soldiers, though at first inclined to be resentful, will at length be grateful for the discipline. It must be kept in view that all the soldiers and officers ought to be thoroughly respectable in character, and when they return home, it should not be with dissolute habits and as persons notorious for vice. If this excellent aim is not attained, the infection will spread daily to a larger number. Prohibitions will become entirely useless, and the general's reputation will be destroyed by the conduct of those soldiers who are ranged under the folds of his own banner.

From this book it is quite clear that by high-toned Chinese statesmen the moderate use of opium is not thought of as a possible alternative to be substituted for its entire abandonment. They require in soldiers and all officers, civil or military, total abstinence from the use of the drug. This is regarded by them as necessary for maintaining discipline.

To understand aright the origin of the opium trade it is necessary to go back farther than the times in which Kämpfer lived. In the sixteenth century, and a hundred years at least before his day, opium was received at the southern seaports of China at a fixed rate of two-tenths of an ounce of silver for every thirteen pounds weight. At the end of the fifteenth century, when Vasco de Gama conducted his ships to India and revolutionized the trade of the world, opium was already cultivated in India, to be exported by sea to countries farther east. This was the work of the Arabs, who for a very long period had been the principal merchants in the Indian seas. In

A.D. 637 they had conquered Persia, and in A.D. 640 Egypt. The consciousness of military and civil power woke up in them, at the same time, the spirit of scientific inquiry, and with it the love of commercial adventure. They established trade settlements in various places on the coast of India and in the Eastern Archipelago, as well as on the east coast of Africa. They traded to China, and many of them resided in Canton and other cities, while Mohammedan travellers visited the Chinese capital, where they were permitted, in one instance, to see the emperor and converse with him on subjects illustrative of their religion and the dominion and state of the caliphs of Bagdad.

The commencement of Mohammedan intercourse with China is very curious. The maternal uncle<sup>1</sup> of Mahomet was sent by the prophet to trade in China. His name was Suhabasai or Shahaba, or Saidi, and he went with Chinese envoys to return gifts. The emperor approved of what he said on moral doctrine, and he was allowed to remain in China. He built at Canton a monastery, and resided there. Returning to Arabia on a visit, he arrived subsequently to the death of Mahomet. After a time of grief, he asked what directions the honourable and holy one had left. He was told that he had left orders that he wished the Koran to be taken to China and taught there on Fridays. Suhaba followed these directions, and became the teacher of the Mohammedans in China.

His first arrival in China was about A.D. 628. His tomb is still maintained by the Mohammedan inhabitants of Canton, with the help of the revenue from houses and lands by which the monastery is supported. All this shows that the Arabs traded with China from the seventh century onwards, and the tablets preserved in the tomb and monastery witness to the general accuracy of this account. For instance, the tomb was made in A.D. 629, soon after Saidi Suhaba's arrival, and was built, therefore, during his lifetime and with a view to his subsequent burial there. This is in accordance with Eastern custom.

In the accounts of the two Mohammedans who travelled to China, translated from Arabic by Renaudot during last century, we find described many circumstances belonging to the trade of those times. They relate what they knew in the ninth and tenth centuries. One account was written A.D. 851, and the other sixty or seventy years later, and they belong both of them to the times of the caliphs of Bagdad. The Arab navigation was chiefly from the Gulf of Persia. There were several ports in this sea which had a flourishing trade during the period when the Bagdad caliphs were in the enjoyment of prosperity. But, later than this, trade still clung to this sea down to the time of the Portuguese at the beginning of the sixteenth century, and this was the reason that Albuquerque, among his many captures of commercial ports in the East, included also some of the Mohammedan trading ports in the

<sup>1</sup> *Chinese Repository*, vol. xx., Feb. 1851.



Gulf of Persia and in North-Western India, where trade in opium, with other productions of those regions, was then carried on.

In the fifth century Chinese junks traded to Ceylon, as we learn from the narrative of Fahien. Rubies and pearls, with gold, pepper, and the drugs and balsams of countries farther west, would be sought by these junks. In the seventh and eighth centuries they voyaged farther than Ceylon. They went regularly to ports on the coast of Persia and Arabia. Siraf and other harbours saw Chinese junks and sailors anchoring in their waters and engaging in commerce; and Arabian vessels went thence to China to have a share in the profits of the same trade. Among the articles in which trade was conducted were the aloes of Socotra, camphor, nutmegs, musk, civet, peacocks and parrots, silk, various spices, pearls, fish-oil, amber, ivory, ebony and red wood, porcelain, betel nut, and the like, which have ever since been in demand, and still hold their place in the import and export tariff of China. The reason of prosperity in trade at that time is found in the fortunate circumstance that two powerful and civilized dynasties grew up to power *pari passu* in the seventh century, viz., the T'ang dynasty in China, and that of the caliphs at Bagdad. A powerful dynasty always encourages commerce, is able to afford facilities to merchants, and opens up trade routes in a way that cannot occur in times of political disaster.

The Syrian Christians went to China in the year A.D. 636, and were at once introduced to the court. A new and strong government was then just established, and foreigners were welcomed. They had a church built for them by the emperor's command, and everything was done to make them feel that they were welcome.

In the next reign, which commenced 650, an embassy went from the Arabian caliph to the Chinese emperor. After this there is a lull. Embassies ceased to arrive. In the much famed reign of Ming-hwang they begin again in A.D. 713. The envoys say they kneel only to Heaven, and are excused from the prostration ceremony by the express will of the emperor. On a later occasion it is said that they performed the prostration on being reproved for their reluctance. A few years later they went again. In 763, when the Tang dynasty was in distress on account of rebellion and invasion from Tibetan tribes, assistance was received from the Arabs in restoring peace to Central China. This was the time of one of China's most famous generals, Kwo Tsiyi. In carrying out his plans as a general he knew how to make use of foreign aid. He had in his camp a Nestorian missionary who was a court favourite in the time of the emperor Sutsung, 756 to 763. This missionary, Yisi, had an influence which led to his being prominently mentioned in the celebrated Syrian inscription dating in the year A.D. 781. He had an acquaintance with the countries lying to the west of China which proved to be of the greatest ser-



vice to the government. Since he is, in the inscription, highly praised for his skill, he was probably not only a linguist, but also able to describe the budding civilisation of the Arabs. The Chinese general, fighting with the help of foreign allies and missionary priests, gained a splendid reputation for his victories. The Nestorian Yisi also taught Christianity in the palace, for we find, in the account given by one of the Mohammedan travellers of a conversation held by an Arab with one of the last emperors of the T'ang dynasty, that he had an intimate acquaintance with the life of Jesus and with the Old Testament. Books and pictures remaining in the palace, or supplied afresh from the mission, had done their work so far that the emperor had become quite familiar with the biographical facts of Scripture.

The Mohammedans were ardent students of medicine; so also were the Nestorians, who, in fact, in some instances acted as court physicians to the caliphs at Bagdad. Many drugs were taken to China in the T'ang dynasty. They are mentioned in *You Yang Tsatsow*, a work of the ninth century. The drugs and plants are given with Persian or Syriac names. The word "Frank," the use of which is so much extended in India, through the Mohammedan element in the population, to express "European," has also been conveyed to China. In the T'ang dynasty the Greek empire was called Folin, and the same word is applied by the Chinese author of the work just mentioned to Syriac names of drugs and plants occurring in his work. Such is the case with the fig and the olive, which he calls *tini* and *zeto*. Assafœtida, myrrh, oil of benjamin, bezoar, and many of the like vegetable products, occur in this book. The author quotes, in one instance, a Folin monk by name as his informant. It appears, therefore, that he obtained information from the Syrian missionaries living in his time in the capital of China.

The first mention of the poppy is in a work of the eighth century by Sung Yang Tsi. A book was published at nearly the same time, called *Hu Pen Tsau*, "Materia Medica of Western Nations." There was also a work called "New Medical Plants." It was among these additions to the plants with curative virtues introduced at that date to China that the poppy was included. It was carried to China in the two common varieties, the white and red. At that period the seeds were considered of high medical importance, and were soon introduced into the Pharmacopœia, where they stand mentioned about the year 968. They were boiled into a sort of gruel and mixed with bamboo sap, which the Chinese use as a febrifuge. It was not known to the Chinese at that time that there is a subtle power in the poppy capable of checking diarrhœa and dysentery with marvellous quickness. A century later Su Sung, a medical writer, adds that the seeds are good for restoring tone to the stomach and free action to the chest, as well as for expelling unhealthy heats.

Such was the use of the poppy at first in China. It was introduced, as Chinese authors tell us, in the white and red varieties, of which the white at least was the *Papaver somniferum*. But it was employed for the seeds only, and its remarkable virtues were unknown. The suspicion occurs that in the seventh and eighth centuries the Arabian physicians of Bagdad knew little on the subject of the virtues of the poppy. Ebn Sina, or Avicenna, the greatest of the Mohammedan physicians, lived in the eleventh century. The fact that only the seeds were at first used, and that afterwards, in the twelfth century, the use of the capsules is found recommended in medical practice, seems to point to some epoch-making person in Mohammedan medicine. This person appears to have been Ebn Sina. He was a native of Bokhara, possessed unbounded reputation, and kept his place on the pinnacle of medical renown for six centuries. In these circumstances his methods and practice would affect the Mohammedan colonists who about that time came to China in great numbers. Mohammedans and Jews crowded to China by the land route, appearing there as sellers of drugs, physicians, importers of cotton cloth and various goods from Bokhara. They dealt in precious stones, and became innkeepers and butchers. Priests went, too, to teach religion, and physicians to practise their art.

Yet the Greeks from ancient times manufactured opium and were acquainted with its medical uses. The Syrians learned from the Greeks medicine and other arts. They also translated the most noted Greek works on these subjects into their language. From the Syriac it was the fashion, in the days of the caliphs, to translate these works into the Arabic tongue. The Greek medicaments and treatment of disease were therefore known to the Arabian physicians. Some of them, such as Rasi, were admirable investigators. Rasi in particular is highly praised on this account by Sprengel in his history of medicine (*Geschichte der Arzneikunde*). He used opium with unslaked lime and arsenic as remedies in obstinate cases of diarrhoea. He lived in the latter half of the tenth century; he wrote well upon smallpox, a Chinese ancient disease, and he made use of the distilled wine called arrack in his medical preparations. Two centuries later distilled spirit began to be manufactured in China, and is expressly stated to have been conveyed to that country from the west in the Yuen dynasty.

We are brought to the conclusion that it was the progress of medicine among the Arabian physicians, especially those who belonged to Persia (Rasi) and Turkestan (Avicenna), which led to the extended use of distilled spirits and of opium, and caused incidentally the introduction of both these articles of traffic and ministers of good and evil to China. Spirits were first known in China in the fourteenth century, and opium in the fifteenth. In receiving from the Arabs these two powerful stimulants, China



little knew what an inheritance of national suffering would be entailed on her by these dangerous gifts.

It is the eminent historian of medicine, Sprengel, who points out, in his work published in 1823, that Rasi was the first Arabian medical writer to mention spirits. He also notices that Avicenna, whose Canon was the favourite text-book of medical schools for five hundred years, died at Hamadan, in Media, A.D. 1036, of a large dose of opium administered imprudently by his attendant. It is the author of the *Materia Medica* of the Ming period who, writing during that dynasty, says that spirits and distillation came into China with the Mongol dynasty. Both went eastward from Persia with the Mohammedan movement towards the Chinese Empire.

(To be continued.)

#### IV.—CLINICAL CASES OF EAR DISEASE.

By JAMES PATTERSON CASSELLS, M.D., M.R.C.S. Eng., Fellow of the Faculty of Physicians and Surgeons, Aural Surgeon and Lecturer on Aural Surgery in the Glasgow Hospital and Dispensary for the Diseases of the Ear.

CASE I.—*Chronic Muco-Tympanitis, vel Otitis Media Purulenta Chronica, with Caries of Mastoid Process—Excision of Carious Bone—Antiseptic Dressing with Boracic Acid—Partial Cure—Relapse—Excision repeated—Perfect Recovery.*

HELEN W., aged 5 years, was brought to the Glasgow Hospital and Dispensary for Diseases of the Ear for treatment of dulness in both ears, with a purulent discharge from the left. She received attention as an out-door patient from time to time for a few weeks, and was admitted into the hospital on 5th March 1881. At this time there was a distinct sinus in the mastoid region, leading to the antrum mastoideum on the left side, and there were polypous growths in the corresponding meatus. On 12th March, under chloroform, the mastoid process was laid bare by free incision, the carious bone removed, and the unhealthy granulation tissue scooped out. Free drainage was established between the opening in the mastoid and the external meatus. The parts were syringed out with a saturated solution of boracic acid, and covered with finely powdered boracic acid, over which was applied boracic lint. A tent of this lint was also inserted into the opening in the mastoid. This dressing was renewed at first daily, and later every second or third day. The wound healed gradually till the date of her dismissal on 12th May. At that time there was still a little discharge from the external meatus, and the wound was almost closed.

This patient was re-admitted to the hospital on 12th October, the wound never having closed completely. The presence of more carious bone was detected, and the operation and treatment



repeated as above. After three weeks' stay in the hospital she was dismissed, the wound being nearly quite closed and in a perfectly healthy condition.

CASE II.—*Chronic Exanthemat Catarrh, vel Otitis Media Purulenta Chronica (Rubeolar), with (1) Periostitis and (2) Necrosis of Mastoid Process.*

Isabella M., aged 9 years, suffered from measles during the month of April 1879, followed by a purulent discharge from the right ear, which had continued till alarming symptoms set in on the evening of the 9th December 1881. Dr Cassells was called in on the following day to see the child, whom he found in a comatose condition. After a free incision was made through the periosteum over the mastoid process the patient became quite sensible. On the evening of that day she was reported as doing well, and two days after the operation she was said to have quite recovered. On the 1st April of the following year this patient was brought to the hospital and found to be suffering from necrosis of the mastoid process. After operation and treatment as in Case I., she was dismissed cured after staying in the house about a month.

CASE III.—*Chronic Muco-Tympanitis, vel Otitis Media Purulenta Chronica, with Mastoid Periostitis.*

Mary L., aged 16 years, was admitted to the hospital on 5th May 1881, suffering from great pain in the region of the mastoid process on the right side. There had been a purulent discharge from the corresponding ear, which had continued for some time. A free incision was made over the mastoid, and the wound was covered with finely powdered boracic acid after washing out the parts with a saturated solution of that acid. The meatus was also treated in a similar way. This dressing was renewed from day to day. The patient was also regularly Politzerized. She was dismissed cured on 1st June.

CASE IV.—*Chronic Muco-Tympanitis, vel Otitis Media Purulenta Chronica, with Mastoid Periostitis—Discharge from Mastoid Cells, passing out by External Meatus.*

Eliz. D., aged 16 years, was admitted to the hospital on 24th June 1881, complaining of dulness in the right ear, accompanied by discharge. This discharge was purulent in character, and was found to proceed from the mastoid cells. The meatus was syringed out daily with a saturated solution of boracic acid, dried by means of absorbent cotton-wool, and then filled with powdered acid. The patient was dismissed cured on 9th July.

*Remark.*—Boracic acid is the only antiseptic that has been used in the wards of our Hospital during the last three years. It has been found to answer our purpose—keeping all wounds fresh and odourless.

## V.—ENDEMIC GOITRE IN WISHAWAND NEIGHBOURHOOD.

By ALLEN T. SLOAN, M.B. (Edin.)

PERHAPS it is not generally known to members of the profession that goitre, so common in the Swiss valleys, France, and some parts of England, is endemic in this district, and it might be interesting for them to listen to a few facts about some of the cases, and try to account for their probable cause. Shortly after I came here last December to assist Dr Cowan in his practice, I was surprised at the number of cases under our charge, and, by making further inquiry, have discovered among our own patients no less than twelve suffering from the ordinary form of goitre, and these, with one case of the exophthalmic variety, I will now narrate. With one exception, all affected are of the female sex, whose ages vary from 9 to 72, and these I will mention in their order.

CASE I.—C. D., a nervous, intelligent little girl, aged 9, whose parents have resided in this neighbourhood for eighteen years. About a year ago the goitre commenced in the centre of the neck as a small swelling the size of a marble, and it has gradually increased in size till now a large three-lobed tumour occupies the thyroid region. Each lobe is equally enlarged, about the size of a hen's egg, that formed by the isthmus being very distinct. The swelling is hard, elastic, and non-pulsating, while over it the heart-sounds are heard very distinctly, especially over the central lobe. A marked feature in this case is the embarrassment of breathing, worst on exertion and when she is excited or speaking rapidly. Throughout the night the breathing is so noisy as to keep her parents from sleeping, and when she has a slight cold they have to sit up with her. There is no exophthalmos, but both pupils are dilated, the right more than the left. Pulse 100.

CASE II.—J. C., 12 years of age, noticed a swelling in the thyroid region about a year ago. The right lobe is larger than the left, and very soft, the isthmus not at all enlarged. The heart-sounds can be heard over the left lobe, and are quite normal, as is also the pulse-rate. The tumour has diminished by painting with iodine.

CASE III.—S. C., sister of the above, aged 14, is very anæmic, and, with an elder sister, is being treated for chlorosis. In her case there is a soft, indefinite swelling in the front of the neck; the right lobe is slightly larger than the left, and the isthmus also is affected. There is no exophthalmos in either of these cases. Their parents have been life-residents in this district, and both their mother and grandmother had enlargement of the thyroid. In the former it came on after the birth of her fourth child, but never attained any great size, and occasioned only slight breathlessness.



In the latter it was much larger, and caused great inconvenience till her death from heart disease at the age of 53.

CASE IV.—J. S., age 15, a strong, healthy, rosy-cheeked girl, first noticed her neck begin to swell about three years ago. Since then it has gradually increased in size till within the last three months, when she came under treatment. The swelling is large and very soft; the lobes are of equal size, but there is no enlargement of the isthmus. There is no pulsation, but on auscultation marked bronchial breathing can be heard. The breathing often becomes so noisy during the night as to prevent those in an adjoining room from sleeping. There is great breathlessness on exertion, but no exophthalmos, while the pulse and heart-sounds are normal. This case is interesting from the great size of the goitre, and also from the fact that consanguinity may have something to do with its causation. The mother is said to be imbecile, and the girl is a natural child by a cousin.

CASE V.—A. Y., age 16, a pale, rather anæmic girl, noticed it about two years ago. The enlargement of the lobes is very distinct, the right being about the size of a hen's egg, and larger than the left. The isthmus is not affected. She complains of breathlessness on exertion. In this case there is distinct heredity.

CASE VI.—E. H., age 17, a strong, healthy girl, complains of a soft, indefinite swelling on the neck, which began about four months ago. The isthmus is more enlarged than the lobes. No inconvenience is caused, except when she wears a tight-fitting dress. This girl's mother died of exophthalmic goitre a few days ago.

CASE VII.—J. S., age 17, an engineer, complained of great breathlessness. The thyroid gland is enormously enlarged, the right lobe, if anything, a little more than the left, the isthmus not much affected. The swelling began about two years ago, and has gradually increased in size since. Now it is very soft, but no pulsation can be felt over it, though the heart-sounds are heard very distinctly. The patient lives at Cleland, a village three miles away, but was born in Wishaw and lived here till seven years ago. There is no family history of goitre.

CASE VIII.—J. C., age 24, married, and with two children, states that the swelling was first noticed when she was 12 years of age, and has gradually increased in size since, but much more rapidly after her marriage four years ago. Till lately it caused her no inconvenience, except from the curiosity of her neighbours, but now there is breathlessness on exertion, and still more on excitement. The swelling is of great size, the right lobe much larger than the left, while the isthmus also is much enlarged.



There is no exophthalmos; the heart-sounds are normal; pulse 86; and when at rest she breathes quietly. She is one of a large family, but no other member is affected with goitre, though a cousin of her own age has one which developed at the same time.

CASE IX.—B. M'P., age 29, married, first noticed it about four years ago, after her second confinement. Now the thyroid gland is greatly enlarged, the right lobe considerably more so than the left, the isthmus only to a slight extent. She complains of palpitation and breathlessness on exertion. Most marked is the noisy, rapid, bronchial breathing, which can be heard at some distance from the patient, and is greatly increased by excitement. So well is her case known from this fact, that many have asked me if I had seen Mrs M'Pherson. There is no exophthalmos, and she is a strong, bright-complexioned young woman. Her mother had a goitre, also of great size; while her brother, aged 30, suffers from distinct enlargement of the thyroid, which causes considerable breathlessness on exertion.

CASE X.—Mrs A., aged 30, noticed the thyroid gland begin to enlarge when she was 15, said to be due to a fright after the loss of a pound-note. The swelling is soft, situated exactly between the sterno-mastoids, and is due to enlargement of the isthmus, the lobes not at all affected. She states it becomes considerably larger during pregnancy, and that she suffers much from breathlessness on exertion or when she catches a slight cold. A sister of hers, aged 18, also suffers from goitre, which began when she was 15, while their mother has also enlargement of the thyroid, now much less than it was formerly. There is no exophthalmos in either of these cases, and the heart-sounds are quite normal.

CASE XI.—Mrs Y., age 45, married, has four sons, and one daughter who suffers from goitre. She noticed her neck begin to swell when she was 10 years of age, and it grew to a considerable size till she was 26, when she came under treatment. Now there is a soft, ill-defined swelling, formed by both lobes of the thyroid, which are equally enlarged; the isthmus is not affected. There is slight exophthalmos, and the pulse is 106. There is distinct heredity in this case, her mother and sister both being affected with this disease. All the above have been life-residents in the district.

CASE XII.—B. I., age 72, has lived here for forty years, and before that resided for seven years in Carluke. The goitre began forty-two years ago as a slight swelling on the right side of the neck, and gradually increased in size till now it is fully as big as her head. It has never caused the slightest inconvenience except from the deformity it occasions. Now a large tumour occupies the whole of the front and right side of the neck, extending from

the chin to the sternum.<sup>1</sup> At its broadest part it measures 15 inches, while from above downwards it measures 10 inches, the whole circumference of the neck being 22 inches. The distinction between the right and left lobe can be easily made out, and the isthmus does not seem to be specially affected. The tumour hangs over to the right side, and the right lobe is much larger than the left. Over its most projecting part are a few dilated capillaries. It is of firmer consistence than in any of the other cases, and no sounds whatever can be heard over it on auscultation. Patient has had three sons and three daughters, none of whom have goitre. She is a thin but very healthy old woman, having been, as she herself expresses it, throughout life "as strong as a horse." It is wonderful how little inconvenience such a large growth has produced.

Besides the above cases, two more have come under our notice, and doubtless outside our own practice many more might be found with this disease. All affected, with one exception, are females, and it is interesting to note their different ages, though most are girls and young women.

In marked contrast in its nature and symptoms to the above cases of goitre is the exophthalmic variety, one example of which we had under our care, and which I will now mention.

CASE.—M. H., a very nervous and excitable woman, aged 59, married, and with ten of a family, states that she was attacked by cholera the third day after the birth of her second child. About that time a swelling was noticed above the sternum, about the size of a bean, but it never gave any trouble till seventeen years ago. Since then it continued to increase in size, the last three years very rapidly, till it became as large as her fist, but since the 19th of November it has diminished to half its size. Now the front of the neck is occupied by a swelling about the size of a small orange, soft, and pulsating strongly. Over it course distended veins, and on palpation a marked thrill can be felt, most distinct at its upper part. The veins of the neck are much distended, and there is great pulsation over the carotids. On auscultation a double murmur, synchronous with the beats of the heart, can be heard, loud and whizzing in character. It is heard also over the right carotid, though not so markedly, and it is perceptible over the left. There is visible pulsation at the sternal end of the fourth interspace. Nothing abnormal can be heard over the heart-areas except the mitral, where there is a loud, harsh, systolic murmur, completely obscuring the first sound. The pulse is 112, weak, small, and easily compressible. Patient is

<sup>1</sup> To prevent misconception of the size of this goitre, I may mention that the 15-inch measurement was from the root of the neck on the right side to the root of the neck on the left, the tape lying over the most projecting part; and the 10-inch one from immediately below the chin to the episternal notch, also over the apex of the tumour.



much emaciated, and subject to repeated severe gastric attacks, when the tongue becomes coated with a thick brown fur and the bowels obstinately constipated. These attacks are accompanied by alarming failure of the circulation, the pulse becoming hardly perceptible. She used to be much troubled with palpitation, but not since she took to bed fifteen weeks ago; though now she suffers from severe attacks of dyspnoea and a short, hacking cough. The exophthalmos is very marked, and has existed along with the tumour on the neck, though it seems to have increased lately.

Patient was treated with milk diet, antispasmodics, and stimulants, but died on the 17th of March, and, unfortunately, no post-mortem examination was made. One of her daughters suffers from the ordinary form of bronchocele.

I have given details of the above case to illustrate the great difference in the symptoms of the two forms.

Of the 12 cases of simple goitre 7 have the right lobe larger than the left; in 2 the right and left lobes are equally enlarged and the isthmus unaffected; in 1 the three lobes are of equal size; in 1 the isthmus is more enlarged than the lobes; and in 1 the isthmus alone is affected. In those which are of great size, as a rule, the right lobe is larger than the left, and the isthmus more or less affected, in 2 cases very distinctly, in 3 only to a slight extent. The consistence of the tumours, in the majority of cases, is soft and elastic, in the old woman's very hard and resistant. Generally the different individual parts of the gland can be distinctly made out.

*Symptoms.*—In one or two of the cases patients state that no inconvenience is caused, but the majority complain of breathlessness on exertion, and more particularly on excitement of any kind. In three the noisiness of the breathing is most marked, and prevents others from sleeping during the night. This is worst when the isthmus is affected. One or two complain of palpitation, but in none could any abnormality of the heart be detected. In only one case was there exophthalmos, that of Mrs Young, while anæmia was present in four cases, all of them young girls below 16 years of age, and none of whom had begun to menstruate. The others are apparently strong, healthy women, with good colour; and all are intelligent and active, with one exception, the girl Janet Smellie, who is rather stupid. In none was there any difficulty of swallowing.

*Causation.*—Most important, however, in the study of these cases is to discover if their occurrence here can throw any light on the causation of goitre. The disease, as exemplified above, is most common in females, and is said to occur chiefly between the ages of 17 and 24, and to be rare before puberty. Now 6 of our cases occur in young girls below 17, while 3 of the others positively assert that the disease began at the ages of 10, 12, and 15 respectively. The young man also noticed



his when he was 15. I cannot help thinking, however, that the disease has some connexion with the uterine functions, for the gland increased in size more rapidly near or at the age of puberty. Also, each of the women who have families distinctly state that the gland enlarges more and more each successive pregnancy, and in these it has attained a very great size. None of them, however, noticed any special increase in size during the menstrual period, though enlargement of the thyroid is common enough at that time without disease. In the above cases goitre does not seem to be distinctly associated with anæmia, though this is marked in one case, and other three of the young girls are rather pale; nor with debility, for all are strong, healthy, and able for their work. Its origin has been attributed to a variety of causes, which are mentioned in the article on goitre in Holmes' *Surgery*. These are, the drinking of melted snow or water impregnated with calcareous particles, residence in deep valleys where the air stagnates and the population is deteriorated by intermarriage, the use of improper or particular kinds of food, and various meteorological and geological conditions. To find out the real cause of its endemic nature in this district all these have to be taken into consideration. According to authorities, it most commonly occurs in valleys or at the bases of high mountains, and is often associated with other bodily or mental deformities. In these valleys the air is damp and stagnant, and the people deteriorated by bad food and close intermarriage. The town of Wishaw stands at an elevation of about 460 feet above the sea-level, and is freely exposed to the north and west winds. The atmosphere does not seem to be particularly damp or dry, and is tolerably clear and bracing. The patients all belong to the working class, their relations being chiefly miners, and are both comfortably clad and fed, so that neither of the above causes can account for its prevalence here. Likewise, from Dr Bradford of Carlisle I learn it is quite common in that town, which stands at an elevation of about 520 feet, while at Shotts, situated still higher, several cases have occurred. On the other hand, in the low-lying towns of this district, such as Coatbridge and Airdrie, no goitre is to be met with. Dr Wilson, who has been in practice in Coatbridge for over forty years, states he has never seen a case of bronchocele in a native of that place, and that the two cases under his care at present come from Shotts. In only one case, that of the girl Janet Smellie, could consanguinity have anything to do with its production, as she is a natural child to a cousin of her imbecile mother. In none of the others could this cause predispose, while the remaining members of affected families are quite strong and healthy, both bodily and mentally. No special meteorological or geological conditions can account for it, so its presence here can only be ascribed to the nature of the drinking water or heredity. Of the twelve cases mentioned, eight show distinct heredity. In six the mother and grandmother both

suffered from goitre, while of the remaining two one has a cousin affected with this disease, and the other's mother died two weeks ago of the exophthalmic variety. It is interesting to note this latter case, the mother for years subject to exophthalmic goitre, and the daughter, a strong, healthy girl, now with the ordinary form of bronchocele. The above cases seem to point to the disease being markedly hereditary on the female side. In the other four patients no family history is traceable. Though heredity may play an important part in the causation of goitre, yet this cannot altogether explain its endemic nature, so we must now refer to the water supply. About thirty-five years ago the chief industry of this town, like many others, was weaving, and there was hardly a mine or miner in the neighbourhood. The water supply at that time was chiefly from springs and wells, but after the mines were worked the water was brought into the town from one or two disused pits. Those inhabitants who remember the quality of this water state that it was very hard and very bad; and, according to one or two who have been for thirty or forty years resident in the district, goitre was more common then than it now is. That it was prevalent some years ago can easily be learned from the patients when they talk of their former doctors, who they say used to call it "Clydesdale" or "Wishaw" neck, and who always ascribed it to the nature of the drinking water. The present water supply was introduced about fifteen years ago, and is brought from Gair, in the parish of Carluke. Dr Bradford states that the usual supply of that district is from springs, wells, and disused pits; and as I have been able to get an analysis of the water made in 1864, before any works were constructed, it should give a fair idea of the nature of the inorganic constituents it contains. As at Shotts the drinking water will also be got from springs and wells, and as the soil and substrata present the same characters as in this immediate neighbourhood, it will probably also pretty fairly represent the nature of the supply there. The analysis of 1864 was made by Mr F. Penny, Professor of Chemistry at the Andersonian University, who found an imperial gallon of the water to contain 11·35 grains of dissolved ingredients. Of these 8·95 grains were saline matter, chiefly salts of lime and magnesia; thus of—

Carbonate of lime                      there were 5·20 grains per gallon.

|                       |   |   |      |   |   |
|-----------------------|---|---|------|---|---|
| Carbonate of magnesia | " | " | ·45  | " | " |
| Sulphate of lime      | " | " | 1·62 | " | " |
| Chloride of magnesium | " | " | ·48  | " | " |
| Chloride of sodium    | " | " | 1·00 | " | " |
| Silica and phosphates | " | " | ·15  | " | " |
| Oxide of iron         | " | " | ·05  | " | " |

The water analyzed at this time was principally surface water, but in 1876 a sample taken from a street well was analyzed by Dr Macadam of Edinburgh, and this was chiefly spring water. He found it to contain carbonate of lime 1·50 grains per gallon, car-



bonate of magnesia 0·48, sulphate of lime 1·77, sulphate of magnesia ·81 grains per gallon; also traces of chloride of magnesium, and 1·32 grains of chloride of sodium. The hardness in degrees was 4·6, while in the analysis of 1864 it was 7·5.

The town-clerk informs me that the present supply is composed of spring and surface water in about equal proportions, and that near the works are several disused limestone quarries. The prevalence of goitre in a district supplied by water containing so considerable a proportion of lime and magnesia salts would lead one to the general belief that the drinking of it is the chief cause in the production of the disease.

*Treatment.*—On the treatment of goitre I have little to say. Those who have submitted to it have been much benefited by painting the swelling with iodine, and the use of iodide of potassium internally.

Interesting to note in the above cases is the ages of the patients, the early period of commencement of the disease, the absence of any serious symptom except the great breathlessness on excitement and exertion, its distinct heredity, and its occurrence as an endemic disease in an elevated district in Scotland, where its presence previously has not been particularly noted.

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## VI.—SURGICAL EXPERIENCES IN THE ZULU AND TRANSVAAL WARS, 1879 AND 1881.

By D. BLAIR BROWN, F.R.C.S. Edin., Army Medical Department.

(Continued from page 1101, Vol. xxviii.)

CASE XII.—No. 2136, Private W. S., of the 94th regiment, was wounded, at the action of Brunker's Spruit, in the right shoulder. The bullet entered at the posterior edge of the insertion of the deltoid muscle, smashing the head of the humerus and injuring the joint, and lodged. Numerous pieces of bone had come away, one unmistakably a portion of the articular end of the humerus. As the probe passed freely into the joint, and found it full of sequestra accompanied by profuse suppuration, on the 7th May 1881 I made the necessary deltoid incision to excise the joint, remove the sequestra, and look for the bullet. The head of the humerus was found in fragments lying in the glenoid cup, which was devoid of all its articular cartilage. I removed the former and freely gouged out the latter. The bullet could not be found. The case was dressed in the manner I have advocated.

10th May.—I discovered the bullet lying at the apex of the scapula, it having gravitated downwards behind the scapula, and cut it out. It is remarkable how many instances of this one meets with, bullets entering the shoulder being eventually discovered in

this position. The bullet was a Westley Richards rifle one, and had its apex considerably flattened.

16th May.—The incision having all healed, the sutures were removed.

7th June.—This man was one of the most useful helps in the ward, and was able to flex and extend his forearm excellently, and to move his shoulder a little. Only a few drops of pus, from point where drainage-tube was in, now.

21st June.—Arm so well that he carries heavy pails of water from the water-cart and into the ward with it.

22nd June.—Unfortunately erysipelas attacked the small open wound mentioned, and rapidly spread over the whole shoulder. A large abscess formed in the tissues of the forearm, which was incised and a quantity of pus evacuated.

26th.—The temperature at nights being still high, 103° F., and the probe coming on bare bone at the point where the humeral shaft was divided, on consultation with Brigade Surgeon Watts, my immediate medical chief, and Surgeon-Major J. Scanlan, he was placed under chloroform in order to remove this. As there existed evidence of considerable mischief, the tissues posteriorly over the joint being greatly inflamed and infiltrated with pus, I made a free incision posteriorly and reached the joint, when I found a long tunnel-shaped abscess sac enveloping the shaft of the humerus. I thereupon enlarged the anterior wound, and found the shaft bare of its periosteum. By means of a chain saw I removed about an inch of the humerus, as we considered it necessary to remove all dead bone. Acute periostitis and osteitis had occurred, not a particle of periosteum enveloped the bone, and its texture was so soft that the nail easily penetrated it. Under those circumstances I had to remove, in a similar manner, another inch. This also was found in a like condition, so I had to go on removing piece after piece until, counting the previous excision, far more than five inches—the amount once removed with success in the American war—were taken away. It was now decided that amputation at the shoulder was our only course. This I at once did, making use of the incisions anterior and posterior already made, forming a deltoid and inner flap. The outer edges of the flaps were so infiltrated with inflammatory products that it was with difficulty I could pierce them with a needle or draw them together. I again had to scrape and gouge the glenoid cavity. Two hours and a half were expended before the various steps undertaken were accomplished, every effort being taken to save the limb. The patient, who had been so proud of his arm after the former operation, never imagined, any more than we did, that it would be necessary to amputate the limb. He was very philosophic on the subject, and bore the loss most cheerfully.

27th.—Fever subsided, and the patient slept well.

28th.—Owing to the profuse foul-smelling discharge, the wound



required to be dressed twice a day. From the nature of the glenoid cavity this was to be expected for a time.

29th.—Temperature normal. Wound freely discharging.

2nd July.—The outer flap a little inflamed to-day. Poulticed.

4th.—Poultices stopped, inflammation subsided, free discharge.

6th.—Took out all the stitches; wounds healed completely except where drainage-tubes are; all ligatures but the main one away. This latter came away the following day.

8th.—Patient up and out of the ward for a little to-day.

10th.—Quite healed, fourteen days after operation. This man is now in the corps of commissionaires, London.

CASE XIII.—No. 4454, Corporal J. E., of the 3rd 60th regiment, was shot, at the Ingogo, in the shoulder and elbow of left arm and in the right heel, making three distinct bullet hits. The projectile striking the shoulder entered through the upper anterior portion of the deltoid, passing through the head of the humerus, going down the back without escaping through the axilla, and emerging about the fifth rib, two inches to inner side of angle of scapula. The second ball hit the elbow in its posterior aspect near the inner humeral condyle, passing through the joint, and escaping two inches below upper end of ulna, also posteriorly. The elbow was bent when hit. The wound in the foot was a deep hole in the os calcis. From this I removed a piece of his sock and leather of his boot, which had been driven in by the bullet, the latter not itself lodging. Nothing could exceed the emaciation and pain which this man suffered from when I saw him. The shoulder and elbow joints were greatly swollen and full of pus, and his agony when being dressed was beyond description. On the 28th March I removed the arm at the shoulder-joint. The articular cartilage of the joint was quite gone, the glenoid cavity was rough, and required freely gouging. The humerus was smashed anteriorly through the anatomical neck, and several sequestra were present. Posteriorly the head was uninjured, and no evidence of starring or fracture existed. The elbow-joint was open, the inner condyle of the humerus was deeply grooved by the bullet, the head of the ulna was in fragments, so also was the articular surface of the head of radius. Both joints were full of foully-smelling pus. The stump was treated in the way I have advised. The method adopted for removal of the limb was Larrey's, slightly modified. By making the semilunar flaps from the acromion process down to an inch below the top of the humerus after they are dissected back, we have practically done the operation without cutting a large vessel, the final sweep of the knife being so simple that the operator himself can with one hand seize the remaining tissues with the vessels, while he divides with the other. There is one slight objection to this not encountered with the deltoid flap; that is, the want of muscular covering for the acromion process, which

is very apt to be unduly prominent and tender for some time. However, in military surgery, as well as in civil, the individual circumstances of cases must guide us. The patient had had hypodermic injections of morphia for such a long period, it was found difficult to get him to discontinue them, even when the source of his pain was removed.

*31st March.*—Complained greatly of his old pains in the arm and elbow, which he knew must be imaginary, as the limb was off. Temperature had gone down, and the wounds healing well.

*4th April.*—Temperature normal; sat on the edge of the bed to have his stump dressed. Wounds healing rapidly.

*7th April.*—Tubes, ligatures, and stitches all away.

*8th April.*—Was outside the hospital, sitting for a little while.

*19th April.*—Was up and about; wounds quite healed. He is now in the corps commissionaires, London.

CASE XIV.—No. 1760, Private E. C., of the 58th regiment, was hit in the right shoulder at the attack on Lang's Neck. The bullet entered at the acromion process, near the posterior edge of the insertion of the deltoid, going directly through the glenoid cavity, and made its exit through the middle of the clavicle, smashing the bone, so that the ends protruded from the wound and were denuded of their tissues. On its way it passed outwards, grooving its course along the whole side of his neck, and escaped. The head was turned towards the opposite side to that on which he was hit, otherwise he would have been immediately killed. The bullet, instead of hitting the neck obliquely, would have entered it in a direct line, and probably lodged at the base of the brain, fracturing the skull. The humerus appeared to be quite uninjured, but on rotating it the articular ends, glenoid, and head of humerus were found to be rough. The probe passed direct into the cavity of the joint, which was full of offensive pus. A very large abscess full of similar fluid existed along the sheath of the biceps; a small opening was present at the base of the belly of this muscle, giving egress to a portion of the accumulated matter. On the 28th of April he was placed under chloroform for the purpose of doing what I thought necessary. After making the usual deltoid incision and tilting out the head of the humerus from the glenoid cavity, hoping to be able to excise, I found the head and shaft of the humerus bare and rough, neither cartilage nor periosteum being present. This condition of things extended as far down the shaft of the humerus as the abscess above noticed, namely, as far as the muscular portion of the biceps. There was therefore no course open but to amputate, which was done. I made use of the incisions already made, so as to have a large muscular deltoid and posterior flap. The whole of the cup of the glenoid was found bare, and the coracoid and acromion processes fractured. The whole of these were removed by dissection and the bone-pliers. The smashed end of the clavicle



was also excised through a separate incision. Owing to the prolonged nature of the proceeding, a good deal of bleeding took place. The wounds were dressed in the usual way. Temperature the night previous to the operation  $102^{\circ}6$  F.; the night after it fell to  $100^{\circ}$  F. The dressing was not removed until the second day after operation, when it was found that all the discharge was coming freely away from the tubes. The pus had a very foul smell. In order to maintain the patient's strength, (he being greatly prostrated,) champagne, brandy, and soups were given at regular intervals.

*1st May.*—The flaps being very much inflamed, and the discharge still being copious and offensive, poultices were applied. Temperature  $101^{\circ}$  F. at night.

*2nd May.*—Put in another drainage-tube, making three in all.

*3rd May.*—Stump had lost its red appearance and the pus its smell. Patient was able to smoke. When asked how he was, replied "A1" in a most cheery manner, and he was known in the hospital by this sobriquet for weeks afterwards.

*5th May.*—The poultices were stopped, flaps and wound looking well.

*10th May.*—Pus gradually lessening in quantity.

*15th May.*—Sutures and ligatures all away; healing rapidly.

*1st June.*—Is so well as to be able to get up to-day.

*18th June.*—Having quite recovered, left Newcastle *en route* for England.

CASE XV.—Private W. H., of the 58th regiment, was shot in his left shoulder while storming Lang's Neck. When wounded he was one of the front men, and was in the "recumbent" position, a "rush" having just finished, and was loading his rifle, ready to fire. The bullet entered at the highest point of the shoulder, in line with the sterno-clavicular articulation, proceeding in a line downwards towards the axillary space, crushing the scapular processes and glenoid cup, and escaping in the hollow of the axilla. When first seen by me the arm was perfectly useless. There were numerous large collections of most fetid-smelling pus in the arm and along the parietes of the thorax. At the camp from which he had come, he had been kept in a separate tent, and the attendants waiting upon him had been allowed to smoke, so dreadful was the smell from his shoulder. He was emaciated to the very greatest degree, "nothing but bone and integument." Quite a pint of pus was daily taken from the abscesses. His other arm had been injured by a blow, he said; it also was rendered useless and stiff. He was therefore in a condition of the most extreme helplessness. He would only allow himself to be raised in bed by catching him by the hair of the head and thus getting him up. His awful yells during the process of changing his dressings were familiar to every one in the camp. No less hopeful a case could possibly have been met with for operative treatment,

which, of course, was urgently called for. On the 8th May I determined to give him the chance, and he was placed under chloroform. Not knowing for certain the amount of destruction caused by the prolonged continuance of inflammatory action, I determined to commence as if I were about to excise the shoulder-joint, and see how things were. I commenced my incision from the point of entrance of the bullet and in a direct line over the acromion and down the arm, reflecting the lips of the wound, and laying open the joint. The head of the humerus was destitute of cartilage and very rough, the glenoid cup was fractured from the body of the scapula, and the articular cartilage all gone. The arm being stiff and useless, I amputated the limb, extending the incision already made round the upper part of the arm. When the arm was off I then removed the cup of the glenoid and all the sequestra of scapula found loose about the shoulder.

*15th May.*—Wound healing by first intention; the tube drains the whole stump most perfectly. A tube was inserted into the abscess on the thoracic wall, and now that the limb is off it is quickly drying up.

*26th May.*—Chest abscess quite well. Patient sitting up on a chair. This is the first time he has done this since wounded, four months ago. Sutures and ligatures all out by the twelfth day after operation. Patient gained strength and flesh in a most marvellous manner. Uses now his right arm to eat his meals with, though the movement is impaired, and he has ceased to "bellow" when being dressed.

*29th May.*—Some local signs of inflammation at bottom of the stump to-day. Poulticed.

*1st June.*—On pushing in a probe to a considerable depth, I found some bare bone. This accounts for the unexpected renewal of the inflammation and suppuration.

*3rd June.*—The above still continuing, under chloroform I had to reopen half of the healed cicatrix of the stump to reach the cause of the mischief. The acromion and coracoid processes and nearly half of the clavicle were found more or less in a state of inflammation, soft, and destitute of periosteum. I therefore excised the whole of these. Tubes, as usual, were put in.

*17th June.*—Discharging now freely, and no bony smell.

*20th June.*—Wound healing well; sutures removed again.

*27th June.*—Drainage-tube removed. Is up most of the day.

*30th June.*—Out walking. Voraciously hungry.

From this date he got rapidly well. In March 1882 I saw him in England. He was then a very powerful, muscular man, and, from the peculiar nature of the parts removed, served as a difficult "nut to crack" for several surgeons unacquainted with the details of the case.

#### GUNSHOT INJURIES OF THE ELBOW.

Four cases of penetrating gunshot injuries of the elbow came



under my care, all of which required the operation of excision to be performed upon them. It is very hard to know what the expectant surgeons look forward to in treating such injuries in their way. After weeks of suffering, inflammation, and all its concomitants, if the patient survive, there is a remote chance of ankylosis resulting. In all the cases now to be recorded, no probability of such a termination showed itself, but rather bad becoming worse, through periostitis and osteitis setting in, as is usual under such conditions. It will be seen that I was not deterred from attempting excision under a variety of conditions which might lead some surgeons to the opinion that the cases were too severe for such treatment, and suitable only for amputation. As regards the manner of operating, I was guided entirely by the nature of the injury, the wounds of flesh and bone. There cannot be a doubt as to whether of the two methods of operating is the easiest and theoretically followed by the best results. The single long incision, by avoiding injury in a transverse direction to the triceps and the fascia of the forearm, as well as preserving the relationship between them and the anconeus muscle, must always be more surely followed by successful use of the limb afterwards than when the H or —I shaped incisions are made. Two of the following cases were operated on by means of the single straight, and two with the H shaped incisions. It will be noticed that one of the cases operated on by the latter method, even after a great deal of the forearm was removed, was followed by the most complete success.

CASE I.—No. 1932, Private B. Q., of the 94th regiment, was hit in the right elbow at Bruncker's Spruit. He came under my care on the 23rd of April, four months after the injury. His condition was as follows:—The bullet had entered 2 inches from the olecranon on the radial side, passing through the head of the radius and elbow-joint, then going towards the inner side, and making its exit  $1\frac{1}{2}$  inch from the middle line of the limb anteriorly. The joint had been poulticed for a long period, and was much swollen and full of pus. A probe passed into the joint. No attempt at ankylosis had taken place. On 2nd May, by means of a single straight incision, I excised the joint, bringing the drainage-tubes and ligatures through an opening I made for the purpose in the under lip of the wound, a practice I strongly recommend. The outer part of the articular end of the humerus was found to be in fragments, but the inner was intact. About 2 inches of the head of the ulna was shattered, and the shaft for another inch down was devoid of vitality, free of periosteum, and rough. Several pieces of bone were found lying loose, portions of the articular end of the humerus and head of the ulna. The removal of the joint was effected without trouble, but in getting out the large portion of dead ulnar shaft the interosseous artery was divided. No difficulty was experienced in tying both cut ends. Only the articular surface of

the humerus was at first removed, but it was found that the shaft above was devoid of life, so another slice had to be taken away, as far up as the commencement of the condyloid expansion.

*3rd May.*—Considerable oozing; tube acting well.

*4th May.*—Suppuration free, especially from wound of exit. By the 7th the incision was quite healed and all the discharge coming through the drainage-tube.

*13th May.*—Patient sat up in a chair; wound firmly healed; the arm in a sling flexed, all sutures and ligatures away. Assisted by his other arm, he moved his injured one.

*20th May.*—Was out walking about most of the day.

*25th May.*—Walked about without a sling, using his elbow-joint readily. The fingers work normally and without pain.

*31st May.*—Commenced working a weight and pulley apparatus fixed up in the ward for this and the other cases.

*14th June.*—Arm quite well; washed his own clothes without difficulty; can now use his arm for any purpose. Shakes hands with friends as well as he ever could. I have heard from him in England. "He can perform any duty he ever could with his arm."

CASE II.—Private H. C., of the 58th Regiment, was wounded, on Majuba Hill, in the right elbow. Came under my care on the 6th of May. The bullet entered the joint posteriorly at the situation of the ulnar nerve at the inner condyle of humerus, smashed the olecranon, passing through the joint and along the under surface of the ulna, making its exit through that bone, fracturing and carrying off a portion of it in the middle of the anterior aspect of the forearm. The probe passed directly into the joint, which was full of pus. The temperature at night was usually 102° F., and there was great emaciation. On the 7th May I operated by means of a single straight incision. Having removed the joint, I examined the condition of the ulna. I found that the affected portion of the ulna was denuded of periosteum posteriorly, while anteriorly it was quite healthy. Believing that the source of the periostitis was the presence of the inflammatory products passing down for exit from the elbow-joint, I felt certain, if that was removed, there being enough periosteum to keep up the vitality of the bone, that all would come right and the fracture even unite. The outer half of the condyloid process of the humerus was greatly broken, and the whole of the remaining articular surface bare and destitute of periosteum. The head of the ulna was in fragments. The bullet must have passed between the bones and then along the ulna. The radius was uninjured. A large abscess full of *débris* existed beneath the head of the ulna. After the joint was removed, owing to the long disuse of the limb and the presence of inflammation for such a lengthened period, the muscles and their tendons in the forearm were greatly matted together, and considerable difficulty was experienced in extending the arm. A







*Plate II*







1.



2.



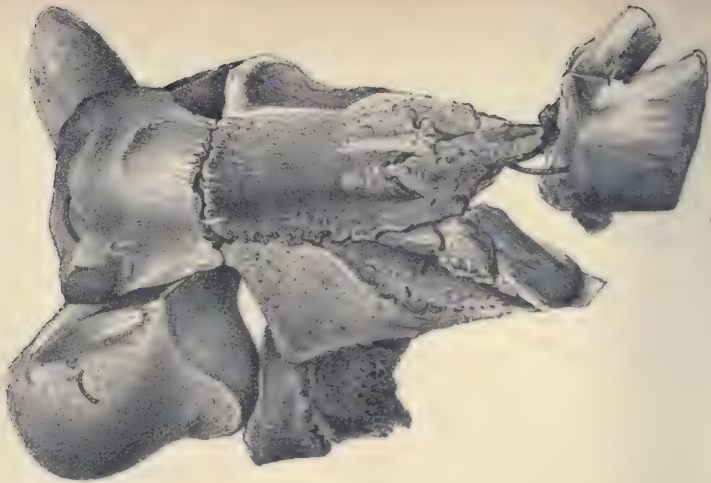
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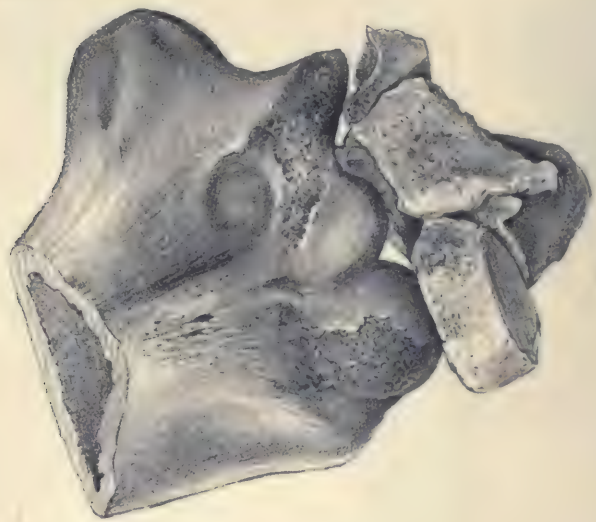
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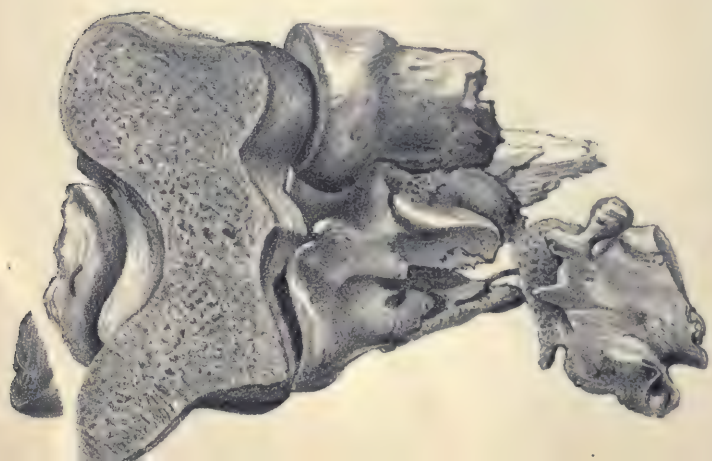


2.



3.

*Plate V.*



1.

drainage-tube was at first inserted along the ulnar track of the bullet, as well as at the incision. The ligatures were brought through an opening made in the under lip of the wound. Oozing took place for two days afterwards.

12th May.—Incision healing by first intention.

20th May.—All but healed; very little discharge from the fractured point of the ulna now; removed the tubes.

25th May.—Flexing and extending the joint freely. Wound over ulnar fracture quite closed.

29th May.—Moves his arms and fingers himself to-day. Fracture of ulna united. His middle three fingers are very stiff. Commenced practising with the weight and pulley arrangement.

22nd May.—Placed the patient under chloroform, and forcibly broke down the adhesions which bound down middle three fingers and prevented him using them. The arm extends and flexes properly now.

30th May.—Wounds all healed; fingers move much better.

24th March, 1882.—I received a letter from this patient, and find he is now a member of corps commissionaires in London. He says "his arm is strong, but his fingers are a little stiff yet, but they are ever so much better. He can lift a heavy table about, and do almost anything with his arm."

(To be continued.)

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## DESCRIPTION OF THE PLATES.

### PLATE II.

1. Case of excision of the elbow, in which nearly one-third of the forearm was removed. Corporal C., of the King's Dragoon Guards, wounded at Lang's Neck. Complete use of arm.
2. Case of Private H., of the 58th Regiment, wounded very severely at Lang's Neck. Amputation at the shoulder, and removal of half the clavicle and the major portion of the scapula. Recovery.

### PLATE III.

- 1 and 2 show the anterior and posterior views of the head of the humerus in the case of Corporal E., of the 3rd 60th Rifles, hit at the Ingogo.
- 3 and 4 show the condition of the femur found in the case of Private D., of the 58th Regiment.

### PLATE V.

- 1 and 2 represent the anterior and posterior views of bones forming the joint of Corporal C., King's Dragoons, wounded at Lang's Neck. The rest of the ulna and radius removed in fragments.
- 3 shows the conditions found and the amount of bone removed in the case of Private Q., 94th Regiment, wounded at Brunker's Spruit.

## Part Second.

### REVIEWS.

*Atlas of Portraits of Diseases of the Skin.* Sixteenth Fasciculus.  
New Sydenham Society: 1882.

MR JONATHAN HUTCHINSON has again laid his rich store of drawings under contribution, and earned the gratitude of the members of the New Sydenham Society, and, through them, of the profession in general. The two plates contained in the sixteenth fasciculus of the Sydenham Society's *Atlas* are of exceptional value. One deals with peculiar phases of molluscum contagiosum. It contains seven separate illustrations, and these deserve very careful study. Figure one represents a copious eruption of molluscum on the arm of a man. At first sight it somewhat resembles lichen planus, but the likeness is merely superficial,—it is typical molluscum. Figure two shows the tubercles seated in a rare position—round the anus. Here they might be mistaken for condylomata. Figure three would not at first sight be recognised as molluscum: the rounded tumours arranged beneath the eye would be taken for sebaceous or Meibomian cysts. They are examples of degenerated molluscum, the thinness of the skin and the looseness of the tissues round permitting of the cystic degeneration. In treating such cases the gland must be thoroughly removed. The fourth figure shows another and deceptive change. The molluscum has inflamed, become hard, and has superficially ulcerated. It bears considerable resemblance to a hard chancre, and the situation, near the nipple of a nursing female, lends colour to this idea. Only a careful investigation and search for other symptoms of syphilis would enable a correct diagnosis to be arrived at. Figures five and six show a transformation which sometimes takes place in molluscum. The tubercle inflames and ruptures, and a horny outgrowth takes place from the exposed surface. The seventh figure exhibits a very rare variety, where a group of molluscous tubercles have formed on the scalp. We would recommend our readers to study this plate by the light of the lecture on molluscum contagiosum contained in Mr Hutchinson's *Lectures on Clinical Surgery*, and the notes on Plate IX. in his descriptive catalogue of the *Atlas* itself.

The second sheet is occupied with a representation of purpura hæmorrhagica. This offers, in all its features, a decided contrast to Plate XXXIX., devoted to purpura thrombotica, the peliosis rheumatica of other authors. Of all forms of purpura, the hæmorrhagic most closely simulates scurvy; and in this plate the unhealthy sallowness of skin, an evidence of its imperfect nutrition common



both to scurvy and some instances of purpura hæmorrhagica, is well shown. The council of the New Sydenham Society have been well advised in issuing additional portraits of skin diseases. There are still some subjects not at all represented, others which might be so more fully, and we doubt if any of their publications will be of more permanent value or have a more lasting reputation than their splendid *Atlas of Diseases of the Skin*.

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*Practical Lessons in Elementary Physiology and Physiological Anatomy, for Schools and Science Classes.* By D. M'ALPINE, F.C.S. (12 Plates, with Text). London: Baillière, Tindall, & Cox: 1883.

It is extremely difficult to understand the object involved in the multiplication of atlases of anatomical plates. In the present instance we are presented with a series of plates, designed to aid the understanding of the main facts of the anatomy of the rabbit and other animals, but there does not appear to exist in this atlas any features other than could be gained from the plates in any good text-book of elementary physiology. For example, in Plate XII., wherein the details of the histology of man and the frog are depicted, we are favoured with plates thoroughly familiar to all who are conversant with the text-books of the day. That "old familiar friend" the human muscular fibre teased out into fibrils, the vertical section of human epithelium, the Haversian canals of bone, nerve cells, and fibres, and hepatic cells, are all represented in this plate exactly as we see them in the books. Hence the questions, Why this reproduction in the form of plates? and what the advantages of these plates with a text necessarily meagre in details? naturally crop up when such works come before the reviewer. What the series of phials in Plate IX. is intended to teach concerning the actions of the digestive ferments puzzles us to say. Three vessels—one supposed to contain starch, the second starch and saliva, and the third starch and boiled saliva—are depicted in this plate; but in so far as the illustration itself is concerned the vessels might contain anything from water or beer to milk or oil. Such illustrations can teach nothing, for they do not even illustrate the text. It is very doubtful whether students of physiology, as such, can find time for the study of comparative anatomy. The investigation of a human skeleton would certainly be an easier matter for the beginner than that of the rabbit's osteology. A section of a frozen rabbit, which the author has here reproduced from another "atlas," is too confused in its details to be of service in teaching. An ordinary dissection of the animal would teach the learner the main facts of rabbit structure far more satisfactorily than such a section. A section of a frozen new-born

child, in colour, forms a frontispiece to this atlas, but we cannot express approval either of the selection of such a subject or of its treatment. There are very many teachers who would reasonably hesitate to obtrude such a form of anatomical illustration on the notice of boys and girls. The plate contains no facts of structure which ordinary physiological diagrams do not give. There are one or two details, in fact, such as the umbilical cord and bladder, which, without any mawkish sentimentality, most teachers would object to placing before lay pupils of any age. Besides, foetal structures cannot, in any sense, be regarded as adapted for the illustration of the details of normal and adult human structure.

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*Ursache und Mechanismus der Entstehung des erworbenen Plattfusses nebst Hinweisung auf die Indikationen zur Behandlung desselben.* Von Dr G. HERMANN v. MEYER, Ordentl. Professor der Anatomie in Zürich. Jena: Verlag von Gustav Fischer: 1883.

THIS is the first of a series of studies promised by Prof. Meyer on the mechanism of the foot in normal and abnormal conditions. The pathology, mechanism of development, and ætiology are discussed at length. New views regarding the pathology of the deformity are laid down. The current doctrine that the fundamental lesion is a perpendicular sinking of the arch, due to the key-stone giving way, is controverted on the ground that the plantar ligaments are not found to be relatively longer in flat than in normal feet. By a series of measurements the author endeavours to show that the arch is really bent inwards and downwards, and that this is brought about by an excessive inward rotation of the astragalus on the oblique axis on which it moves in relation to the os calcis and the rest of the tarsus. Changes then begin to take place in the position of the other bones. The os calcis takes up a position of valgus, so that the outer tubercle is raised to a much higher level than the inner. The cuboid is similarly displaced, while the counter-pressure of the ground forces the front of the foot upwards and backwards in relation to the hinder part. Changes also occur in the form of the bones and in their articular surfaces. These are due partly to atrophy from pressure and partly to arrest of development. There is much to be said in favour of this view, which seems to us more rational than that usually held. Professor Meyer has made out a good case in its behalf, but might have made it even stronger had he investigated from the clinical as well as the anatomico-pathological standpoint. He would then, probably, have attached more importance to the condition of the muscles and ligaments in admitting of such changes being brought about.

In discussing the ætiology, the manner in which the "uppers"



of boots are usually made is condemned. These have their highest point over the centre of the dorsum of the foot, instead of over the instep. In this way injurious pressure is exerted on the arch by the inner side of the "upper," and a tendency to the formation of flat-foot may be developed. The practice of walking on stilts is also objected to, because of the pressure and counter-pressure being thrown on one part of the arch, which may in consequence be greatly weakened.

As to treatment, we hardly think practical surgeons will agree with the author that a plate of steel fixed on the inner side of the boot does no good. We are still inclined to put more faith in it than in the specially modelled boot so strongly recommended by him. Nevertheless, this work is a most valuable addition to the literature of orthopædic surgery. It commends itself as a careful study of a deformity which has not received too much attention.

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*The Student's Guide to Surgical Anatomy: a Description of the more important Surgical Regions of the Human Body, and an Introduction to Operative Surgery.* By EDWARD BELLAMY, F.R.C.S., Hon. Fellow of King's College, London, Surgeon to Charing Cross Hospital, etc. Second Edition, Enlarged and Revised. London: J. & A. Churchill: 1880.

THE second edition of Mr Bellamy's book on surgical anatomy has been improved and added to, and a number of excellent drawings have been added. The work is intended as a guide to students for their "pass" examinations, and it may, no doubt, be considered to fulfil this end fairly well. We do not, however, consider that even this purpose is fulfilled as well as it might be, while as a book on surgical anatomy it still leaves much to be desired.

In many places the mode of expression is not clear, as, for example, in the rules for finding the middle meningeal and femoral arteries, the former of which we may quote:—"If an imaginary line be drawn horizontally backwards from the external orbital process, the course of the middle meningeal artery would be found in this line, about four-fifths of an inch behind it." This would not convey to a student's mind any clear idea of either the position or course of the vessel in question, quite apart from the misleading use of "it" in the last clause.

A very important point in surgical anatomy is a good description of landmarks and external anatomy, but we are sorry to find a very meagre discussion of this part of the subject. This is the more disappointing since Mr Holden has already shown how much may be made of surface markings in his capital little book on landmarks.

For such works as the present we prefer the style adopted by



M. Velpeau, where no anatomical allusions are made except when their surgical bearings can be given at the same time. Mr Bellamy, however, often takes up needless space by a *résumé* of the anatomy of some part or region without pointing out any surgical deductions from his facts. On the other hand, many clinical points are omitted which it would have been important to have mentioned. Why, for instance, should no allusions have been made to the difficulty of securing the divided ends of the vessels of the scalp, when discussing the character of the superficial fascia in that region? Or why should the importance of the submaxillary lymphatic glands in relation to epithelioma of the lips or face not have been pointed out? We suppose the direction of the nutritious artery of the tibia, as given *towards* the knee, must have been a slip.

The woodcuts, many of them from Braune's *Atlas of Frozen Sections*, are carefully chosen and are well executed, and they constitute a valuable series when taken together. Much useful information is dispersed throughout the book; and although we have drawn attention to what seem the chief faults of the book, it would repay a careful perusal.

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*Annals of Anatomy and Surgery.* Edited by L. S. PILCHER, M.D., and G. R. FOWLER, M.D., of Brooklyn, New York. March 1883.

THIS journal maintains its previously high character. The most important article is one by Roswell Park, M.D., on the "Electric Light in Surgical Diagnosis." An account is given of the previous attempts to introduce an electric light into the interior of the body for purposes of diagnosis, and a minute description is furnished of the instruments for this purpose lately perfected by Josef Leiter, instrument-maker in Vienna. How far these instruments may yet be made generally available remains to be seen. The editors have done good service, at any rate, in having brought the matter clearly before their readers.

Dr Prince draws attention to "the bead suture," and Dr Winslow concludes an important series of articles on "Anomalies of the Circulatory Apparatus."

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*The Relative Mortality after Amputations in Large and Small Hospitals, and the Influence of the Antiseptic (Listerian) System upon such Mortality.* By HENRY C. BURDETT, Fellow of the Statistical Society, etc., etc. London: J. & A. Churchill: 1882.

THIS essay is a fair contribution to the subject of which it treats. The author gives the statistics of the total operations performed in sixty-one cottage hospitals, and compares these from different

points of view with the statistics of similar operations performed in large metropolitan hospitals. The result is entirely in favour of the cottage system, in which, indeed, he finds a mortality somewhat less than that which the late Sir James Y. Simpson's statistics gave. These results, of course, only apply to operations performed before 1878, previous to which date the aseptic system of surgery introduced by Professor Lister had not come into general use. By this system, however, the whole question of the relative mortality in large and small hospitals has been, as Mr Burdett says, in great measure solved. For where the aseptic system is strictly carried out, "the size and condition of the hospital buildings are of comparative unimportance." In his conclusion Mr Burdett takes occasion to remark on the tardy and unsatisfactory acknowledgment meted out by Government to the great discoverers in medicine and surgery, a subject which frequently enough exercises the attention of the medical press, but which is not often the subject of remark, as here, by a layman.

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*Meade's Manual for Students preparing for Medical Examination.* Fifth Edition, entirely re-written. By JAMES CANTLIE, M.A., M.B., F.R.C.S., and D. COLQUHOUN, M.D. Lond., M.R.C.P. London: Henry Renshaw: 1883.

THE present work is a "cram" manual in anatomy, principles of chemistry and materia medica, forensic medicine, medicine, midwifery, and hygiene. The subjects are well arranged and brought up to date, and, so far as it goes, the work is good of its kind.

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*Syllabus of Materia Medica, for the use of Students, Teachers, and Practitioners, based on the Relative Values of Articles and Preparations in the British Pharmacopœia.* By ALEXANDER HARVEY, M.D., Emeritus Professor, and A. DYCE DAVIDSON, M.D., Regius Professor of Materia Medica in the University of Aberdeen. Sixth Edition. London: H. K. Lewis: 1882.

WE have on previous occasions expressed our opinion of this syllabus. We have again to ask the authors on what principle they consider the bitter almond (*Amygdala amara*) a much more important article of the *Materia Medica* than *Amygdala dulcis*, the sweet almond. As articles of the *Materia Medica* they are officinal as sources of *oleum amygdalæ*, and, in addition, the sweet almond furnishes two other preparations, one of which is marked important by the authors. It is not quite correct to speak of carbolic acid as a "hydrocarbon, from the destruction of wood by

fire." The introduction contains some excellent suggestions, which might be studied with advantage by the Medical Council.

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*A Guide to Therapeutics.* By ROBERT FARQUHARSON, M.P., M.D., F.R.C.P. Lond.; Late Lecturer on Materia Medica at St Mary's Hospital Medical School, etc. Third Edition. London: Smith, Elder, & Co.: 1883.

HAVING expressed our favourable opinion of this "Guide" on two previous occasions, it is only necessary at present to state that this edition shows that the author has kept thoroughly abreast with the scientific progress of therapeutics. We are glad to see that, though rendering valuable service as Member of Parliament, he still devotes his attention to the study of this important branch of medical education.

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*The Student's Manual of Venereal Diseases: being a Concise Description of those Affections and of their Treatment.* By BERKELEY HILL and ARTHUR COOPER. Third Edition. London: Smith, Elder, & Co.: 1883.

THIS useful little book has now entered upon its third edition, and a very strong point in its favour is, that, although improved and partially re-written, it is hardly at all enlarged.

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*Health: a Weekly Journal of Domestic and Sanitary Science.* Edited by Dr ANDREW WILSON, F.R.S.E. London: Wyman and Sons.

WE have received Part I. of the above, containing the seven weekly numbers published during the months of April and May. We can most heartily recommend the new journal to the notice of our professional brethren. The numbers before us show that though *Health* is young it is a vigorous youth, regarding whose ultimate success there need be little fear. It supplies a felt want, and does it in an able and attractive way. The papers are written in an easy, popular style, and contain much valuable information. The objection which is sometimes made, that such essays usually give but a little knowledge, which may be dangerous, will not apply to *Health* while it is conducted on its present lines. The knowledge of health laws which it seeks to diffuse among the people can be productive only of good. Among the more noteworthy features are a series of articles on "Disinfection," which ought to prove



helpful to those to whom the carrying out of such a process may be entrusted. The editor, under the head "Personal Health," discusses the care of the teeth, the skin, and hair, and adds a most interesting chapter on the "Lore of the Hair." "The Body and its Structure" forms the subject of a number of short and instructive papers by A. J. Manson. "Recreation and Health" is dealt with by several writers, among whom we find C. W. Cathcart on a favourite subject, "Physical Exercise." "Healthy Houses" are dealt with in another series of papers; while among the original essays are articles on the "Germ Theory of Disease," "Our Sailors and their Health," by W. Dommett Stone; "Headaches," by J. Maxwell Ross; "Cottage Hospitals," "Health and Civilisation," and various other subjects of interest. Doubts may be expressed as to the value of the medical column, but a most commendable feature in it is the advice repeatedly given to beware of quacks. *Health* is a valuable addition to our journals, and we wish it a long and prosperous existence.

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*Statistical Report of the Health of the Navy for the Year 1881, ordered by the House of Commons to be printed, 15th August 1882.*

In presenting the above report to the Director-General of the Medical Department of the Navy, Fleet-Surgeon Lloyd calls attention to the satisfactory sanitary condition of the force during the period embraced. The report, as a whole, compares favourably with that of former years. The invaliding rate is practically the same as that of last year, but the sick rate shows a considerable decrease. The general death rate is slightly less, but is still abnormally large, owing to the loss of 144 lives by the blowing up of the "Doterel" at Sandy Point, in the Straits of Magellan. The death rate from disease alone is somewhat greater than that for 1880.

The returns from the home station are altogether favourable, sickness, invaliding, and death rate being each below the average for the past 10 years. Attention, however, is drawn to the frequent occurrence of cases of scabies in the home ports, and comment is made thereon.

On turning to the reports of the zymotic diseases, we find that among the ships at Malta there occurred 146 cases of dengue, with no death, and 137 cases of paroxysmal fever (15 ague, 122 remittent), with 4 deaths. The history of one of the fatal cases of remittent fever is specially instructive as showing the protective power of quinine. The case happened in the person of an officer who formed one of a party of three who went on a two days' shooting excursion in a marsh near Syracuse early in November. The

party was furnished, before leaving the ship, with a supply of quinine, to be taken as a prophylactic. One of the officers took the quinine regularly and escaped, the other two neglected this precaution, and were attacked a fortnight later with severe remittent fever, to which one of them, as mentioned above, succumbed.

Yellow fever was more or less epidemic among the Windward Islands in 1881, but happily—and this in all likelihood owing to the restriction of leave—only one case of the disease, but this a fatal one, occurred among the squadron on the West Indian station.

Remittent fever caused a noteworthy amount of mortality and invaliding on the East Indian station. In addition to this, 6 cases of cholera (5 fatal) occurred amongst a force sent to occupy forts at Makulla, on the Arabian coast.

The returns from the West Coast of Africa include those of the Naval Brigade employed in the Transvaal war. The precautions taken for the safety of this small force are given in detail, of which the results, as shown by the health report, are excellent.

The tables relating to the Contagious Diseases Acts are to be found in the appendix to the report. According to these, syphilis is on the increase, but this increase has mainly taken place in ships while at unprotected ports.

The ratios of increase during the last 4 years, on the 10 years' average, are as follows—

| <i>Ports under the Acts.</i> |  | <i>Ports not under the Acts.</i> |  |
|------------------------------|--|----------------------------------|--|
| From 39.29 per 1000 in 1878  |  | From 92 per 1000 in 1878         |  |
| To 41.84 „ in 1881           |  | To 102 „ in 1881                 |  |

These figures certainly go to show that the Acts are not inefficacious in restraining the spread of venereal diseases.

*On Musical Education and Vocal Culture.* By ALBERTO B. BACH.  
Edinburgh: W. Blackwood & Sons.

THIS volume deals in a comprehensive and scientific manner with the production, cultivation, and preservation of the singing voice. The author is evidently not only an accomplished musician, but also a well-read physiologist, as well as a careful and painstaking teacher. Certain portions of the work cannot fail to prove of value to medical men, more especially the lectures on the "Care of the Voice," and "The Influence of Climate and other External Conditions on Man and the Human Voice." These we would commend to our professional brethren as being replete with hints of great practical utility. We may add that the author appears well up in the literature of his subject, and has appended to his work a complete bibliography of medical and musical writers consulted.



*Economy of Coal in House Fires; or, How to convert an ordinary Fire-Grate into a Slow Combustion Stove at a Small Cost.* By T. PRIDGIN TEALE, M.A., F.R.C.S., Surgeon to the General Infirmary at Leeds. London: J. & A. Churchill. Leeds: Charles Goodall: 1883.

THIS book, as the preface tells us, is an expansion of a lecture delivered on 22nd November 1882 before the Leeds Philosophical and Literary Society. It has for its object the popularizing of an easy method of rendering our present grates more economical in their consumption of fuel, and this object it attains in a very complete manner. The author starts with the view that slow and efficient combustion of coal in house fires depends upon two conditions: first, upon the absence of any current of air up through the fire from the bottom of the grate; and, second, upon the presence of a warm chamber under the fire. And he proceeds to point out how these two conditions may easily be secured in almost any range or grate by the simple device of placing an iron shield in such a position as to completely fill up the space between the hearth and the lowest bar of the grate. The shield the author calls "the economizer," and by its means the space beneath the fire is converted into a closed chamber, and the draught of air up through the fire from the bottom of the grate abolished.

The advantages claimed for the plan are a saving of coal, a diminution of smoke, and an abolition of cinders, in addition to which there is the convenience that the fire, when once lighted, will burn a long time unattended to. In order, however, to obtain the best results in the economizing of fuel, it is necessary, as pointed out in the rules given for the construction of a satisfactory fire-place, that the slits in the grating be narrow, that the closed chamber under the fire have its walls composed of fire-brick, that the bottom of the fire be deep from before backwards, and that the fire-brick at the back arch forwards over the fire. The experiments with the economizer have been made almost entirely with *good Yorkshire coal*; and although the relative merits of coke, anthracite, and peat, when burnt as fuel in a fire-place such as recommended, have been tested, the author's conclusions are incomplete, in so far as they do not deal with other ordinary household coals.

In addition to "the economizer," Mr Teale makes mention of a second shield—"the front damper"—which may be placed over the front of the bars of the grate when "the economizer" is in use and still slower combustion is required. Its value, however, is still *sub judice*.

The book, which is essentially a popular one, is clearly written and profusely illustrated. It is a welcome addition to the literature of the subject with which it deals.



## Part Third.

### MEETINGS OF SOCIETIES.

#### MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXII.—MEETING VIII.

*Wednesday, 6th June 1883.—Dr G. W. BALFOUR, President, in the Chair.*

#### I. EXHIBITION OF PATIENTS.

1. *Dr A. Bruce* showed a rare case of FACIAL PARALYSIS in a girl æt. about 11. It had occurred as the result of exposure to a draught some two years and a half before, and affected the right side of the face. Most people to whom he had shown her had diagnosed paralysis of the left side, the left eye being more widely open than the right, and the line running from the right ala nasi being more marked than that on the left. When, however, she showed her gums the face was seen to be drawn to the left side. There was now slight movement on the right side, but when she first came under notice there was none. She had been treated by the faradic and galvanic currents alternately three times a week. There was considerable contraction now to both, and fair contraction when she showed her gums voluntarily.

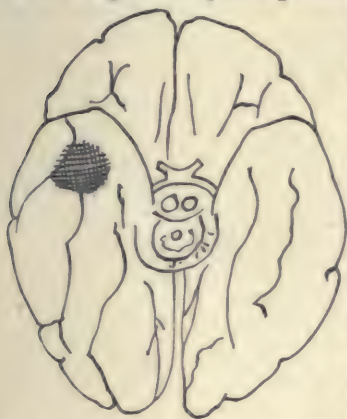
2. *Mr Joseph Bell* showed a case of DISEASE OF THE ELBOW-JOINT successfully treated by antiseptic incision and drainage. The patient was a young girl who had been sent in to have the joint excised, the disease having existed for over a year. The movements on admission were very limited, the arm being kept at a right angle. It was thought a suitable case for incision rather than excision, there being no disease of the cartilages. The incision was made with antiseptic precautions, and a drainage-tube passed straight into the joint. The wound had now healed, and she had very free movements of extension and flexion, and also pronation and supination. Mr Bell said it might be within the recollection of members of the Society that he had on previous occasions shown other cases in other joints, such as ankle-joint, of the same nature, with an equally successful result. He believed that, where the joints had suppurated without involving the cartilages or bones, it was right to try the milder treatment of incision before resorting to the major operation.

3. *Mr Miller* showed a successful case of RESECTION OF THE TARSUS in a boy, who had been admitted to his wards last August, suffering from cario-necrosis of the cuboid. In September he removed the cuboid and some surrounding disease under antiseptic precautions. For a time matters went on well, till the wound became septic, when improvement ceased, and the carious

disease returned. A second operation was performed in November, when there were removed, by means of the gouge and Volkmann's spoon, all the cancellous portion of the os calcis, the external and middle cuneiform, a considerable portion of the metatarsal bones of the fifth, fourth, and third toes, and probably portions of other tarsal bones. Most of the tarsus was thus removed. After this operation, for a time everything went on well, till the wound again became septic and caries returned. In April the disease was a third time attacked, the carious bone being removed. Since then the wound had done well. It remained aseptic, and had now been healed for about a month. New bone had filled up the gap left by the removal of the disease, and the ankle-joint movements were perfect. He thought the case a very remarkable one of the reproduction of bone, and a good instance of the advantage of antiseptics. It was only while the spray was in working order that he had been able to keep the wound aseptic and healthy. When the wound became septic the caries returned. He could not explain this, but it was possible it might be due to a bacillus the same as that of tuberculosis.

## II. EXHIBITION OF SPECIMENS.

1. *Dr A. Bruce* showed a TUMOUR OF THE DURA MATER pressing on the right temporo-sphenoidal lobe. The case was interesting in connexion with the paper he read at last meeting, in respect of the absence of definite symptoms pointing to the presence of a tumour in the brain. The patient complained of epileptic fits occurring at rare intervals during the last nine years. Beyond that no motor or sensory symptom could be detected. There was no optic neuritis nor complaint of headache. The patient died in a fit. He had marked emphysema and great dilatation of both ventricles, and he was apparently suffocated during the fit. The tumour seemed



to be sarcomatous, was about the size of a hen's egg, and made a deep depression in the right temporo-sphenoidal lobe, in the position indicated by the shading in the accompanying woodcut.

2. *Dr James Young* showed a specimen of RUPTURE OF THE HEART. He said that the patient was in her usual health in the morning, but in the course of the afternoon severe sickness came on, accompanied with a feeling of uneasiness in the stomach. At four o'clock he prescribed poultices and lactopeptine in 10 gr. doses. At eight o'clock in the evening, when the patient was sitting up in



bed taking some arrowroot, she expired suddenly, long before he arrived at the house. Dr Littlejohn performed the post-mortem examination next day, and on opening the pericardium a large quantity of sanguineous serum escaped, which at once led him to conclude that the heart was ruptured. The rupture was in the wall of the left ventricle. The heart was in a state of fatty degeneration.

### III. ORIGINAL CONTRIBUTION.

1. *Dr M'Bride* read his NOTES ON TWO UNCOMMON FORMS OF EAR DISEASE, of which the following is an abstract:—

(1.) The patient, an elderly gentleman, was deaf on both sides. In the left ear this symptom was due to disease of the auditory nerve, and the watch could still be heard in contact with the auricle. There was a history of discharge from the right meatus, and almost absolute deafness. Examination showed the presence of a polypoid mass in the position usually occupied by the drum membrane, which seemed to fill the whole lumen of the canal, while a glistening spot was seen to rise and fall, showing that the membrana tympani was in all probability perforated. A probe inserted along the walls of the meatus encountered a slight resistance, but only after it had passed distinctly beyond the most prominent part of the mass. The resistance was so slight that it could not be determined whether the instrument was checked in its course by a union between the tumour and the walls of the meatus or by close contact between the latter and a large polypus. The manipulation, however, slight as it was, produced vertigo and faintness, showing that the pressure of the probe had been propagated to the labyrinth. The diagnosis then, after an examination carried to the utmost limits of safety, lay between (*a*) an cedematous tympanic membrane; (*b*) a polypus attached to the stapes; (*c*) a polypus, the inner surface of which was in contact with the stapes. In view of the somewhat greater probability of the first-named condition, treatment by means of boracic acid in lotion and powder was recommended. After a month of this treatment the hearing was much improved, and the anomalous mass was replaced by a drumhead in which the manubrium mallei was distinctly visible. (2.) After a brief sketch of the conflicting views held by aurists as to the utility of electricity in ear disease, a case was described in which marked improvement followed the use of the induced current, an electrode being applied over either meatus, and the internal administration of phosphorus, no other remedies being used from first to last. The case was one of thickening of the intra-tympanal structures, and, so far as impaired hearing power was due to this cause, it was irremediable. Owing to the pathological condition present, the patient was in a position to feel acutely any additional factor of deafness, and it was argued that so much of the impairment as was relieved by treatment was due



to functional inactivity of the auditory nerve as a part of a general neurasthenia. The results of treatment were that the hearing power, as shown by the watch test, was raised, on the left side, from contact to one inch; on the right side, from just off the tragus to  $2\frac{1}{4}$  inches. The hearing power for conversation, etc., was proportionately increased.

*Dr Ireland* said he had little experience in ear disease, but he was much interested in the treatment of the nervous system by electricity, and he thought that Dr M'Bride had made some very suggestive remarks in that direction. Electricity was sometimes a very disappointing agent in therapeutics, but so many new discoveries were being made in this department that he thought they might expect great good from it yet. He must say that he had never heard of much benefit occurring from its use in paralysis of the auditory nerve, but it did seem to give relief in cases of noises in the ears, possibly by acting as a calmate. It seemed doubtful whether the electric current could restore hearing that was lost, and he thought experimenters were not agreed that it could. He thought there was a little confusion in the use of the terms paresis or paralysis when speaking of neurasthenia, in which, he understood, there was only a tendency for the nerve to become fatigued. Dr M'Bride also talked of electricity passing from ear to ear as being local in its effects, but he thought a current passed through the base of the brain was as likely to produce general as local effects. To apply the electricity locally only one electrode should be put on or near the ear to be treated, while the second electrode was put on the neck, back, or some part remote from the other ear. He knew it was a disputed point whether induced electricity did pass through the brain, but he thought the experiments of Erb and others showed that it did. Dr M'Bride did not state any reason why he preferred the induced current. He (Dr Ireland) knew of no reason why it should not be used, but the continuous current was almost always preferred in such cases. He was much pleased with the paper, and thought the subject worthy of all attention.

*Dr James Young* asked if it was considered safe to apply electricity through the brain. A medical man told him the other day of a case where the patient died suddenly during the passage of the current.

*Dr Ireland* thought such a result not improbable, if the current were strong enough to do it.

*Dr M'Bride* said that, so far as he had seen, the treatment was safe if applied judiciously. If a very strong current were applied all at once, a fatal result might occur. The safe guide was to stop when vertigo threatened, or, indeed, to give the electrode into the hands of the patient, with instructions to remove it on the slightest feeling of discomfort. It was also his custom to test the strength of the current on himself (from ear to ear) before applying it to the patient. Both forms of electricity have been used in the treat-

ment of ear disease—the induced as well as the constant. Faradization has been employed by Duchenne, Woaks, Weber Liel, Field, and others.

## Part Fourth.

### PERISCOPE.

#### MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By ANGUS MACDONALD, M.D.

*Whether, and if so, how long, should one abstain from Midwifery Practice after making a Post-mortem Examination, or after the occurrence of a Case of Puerperal Fever?* (by Dr v. Swiecicki, Erlangen, *Centb. f. Gynäk.*, 16, 1883).—The author, after referring to the divergence of opinions on this point entertained by various authors, such as Winckel, who recommends exclusion for a fortnight, Zweifel, who recommends it for a week, Schröder, for two days, Martin for twenty-four hours, and Küstner, Ahlfeld, Macdonald, and others, who insist upon thorough disinfection of hands, finger-nails, clothing, and body of the physician or nurse to be all that is necessary, time being a matter of subordinate importance provided the disinfection is complete. Volkmann's opinion is also referred to as belonging to the latter class. The author, as a contribution to our knowledge of this subject, records the case of a medical student at Erlangen who examined a midwifery case six days after having opened a thorax, and who had, according to his own account, every day washed with carbolic water in the strictest manner. Before allowing him to examine, the author asked and obtained Prof. Zweifel's permission for so doing. The patient, a iii.-para, had an easy labour, but was subsequently seized with diffuse peritonitis associated with right-sided parametritis, and passed through a well-pronounced attack of puerperal fever, being only able to leave her bed at the expiry of four weeks. The child also was infected, gradually lost weight, and died on the twelfth day. The sectio proved the septic nature of the affection. It has, however, to be noted that, besides the student, the author, a practitioner, and the chief midwife examined the patient. The author says that the practitioner had made no post-mortem examination recently, and that both he and the chief midwife on the same day examined another lying-in woman, as well as other puerperal patients whose convalescence was normal. Relying on this case, the author thinks that abstinence from midwifery practice after making a post-mortem examination, or after a case of puerperal fever, is advisable. He solicits the publication of similar cases, in order to attain to definite principles on the subject.

*Is the temporary Abstinence of the Physician from Midwifery*



*Practice of essential Importance for the Prophylaxis of Puerperal Fever?* (by Löhlein, *Ibid.*, No. 23).—The author refers to the above paper and to the recommendation made in it, and asks the question, Is the physician—responsible before himself or to the world for his actions equally be he a practitioner or specialist—provided he is acquainted with the rules of antiseptics, in the position so to disinfect himself, after touching a dead body or examining a suspicious lying-in case, that he can dispense with abstinence from midwifery practice without danger to his patients? Expressed still more definitely, As clothes may be changed or instruments rendered completely aseptic, are we in the position to disinfect our hands in short time, within, say, a quarter of an hour or a few hours? As a contribution to the answer to this inquiry, the author details his own experience of the past four years, during which he examined and treated in consultation numerous patients suffering from putrid abscesses, puerperal fever, etc., and attended meanwhile 210 midwifery cases in his own practice, without any casualty from puerperal sepsis, and with only very occasional high temperatures. This immunity he traces to the thoroughness with which he disinfected the hands, using soap, nail-brushes, and five per cent. carbolic lotion. The chief point, he maintains, is not what is used, but how the application is made. He followed the principle of performing thrice the act of disinfection—1st, at the patient's house; 2nd, at home, to which he hurried as soon as possible, in order that he might change his clothing and linen; and 3rd, before making another vaginal examination.

*Note on the above* (by Fritsch, *Ibid.*)—Dr Fritsch gives his experience, stating that since 1872 he has never lost a puerperal patient, and has only had one serious lying-in case (parametritis), although he had conducted many severe deliveries, and had followed other practice almost uninterruptedly. In 1873 he treated a brother suffering from putrid pelvic abscess, and had to dress the wound daily. After every dressing he washed himself with a six per cent. carbolic solution. During this time he conducted 240 midwifery operations, and for the first time in the history of the poliklinik of Hallé there was an entire year without a single death. The author argues that this was no mere chance, but the result of the adoption of thorough and intelligent antiseptic precautions.

*May the Physician, after touching Infectious Material, at once undertake Midwifery Practice?* (by Dr Wiener, Breslau, *Ibid.*, No. 24).—This paper is likewise written in reference to the communication of V. Swiecicki. The author states that in the midwifery clinique from autumn 1880 to Easter 1882, during which time Spiegelberg, and, after his death, the author, had charge of it, emboldened by Volkmann's and Ahlfeld's example, students who had to do with infectious materials, such as cadaveric poison, etc., were permitted to undertake deliveries, Spiegelberg and himself proceeding on the principle that if antiseptics actually presented a reliable



protection against infection, it must do so in all cases and under all conditions. In the time mentioned there died 12 out of 471 puerperal women; of these 12, 7 must at once be subtracted, in so far as 1 was brought into the clinique already intensely infected; another had uterine rupture, with the child escaped into the abdomen; 2 had stinking carcinoma of the vaginal portion; 2 had suffered severe injury during delivery, partially owing to instrumental assistance; and 1 had succumbed to hæmorrhage. There remained, accordingly, 5 fatal cases, equal to 1·06 per cent. of the deliveries, which, without the co-operation of other factors, were caused directly by infection. Of these five deliveries it is further to be observed that one woman had been examined outside the clinique by a female not a midwife; two were used for examination purposes; one was examined in the hospital only by the nurse in charge, and not at all by any students. Whether an examination had in this case been made before her entry into hospital could not be ascertained. In the other cases the convalescence was almost always favourable, any high temperatures that were observed being only transitory. These results are by no means inferior to those of most maternity clinics, and do not permit the inference of an unfavourable result from insufficient antiseptic precautions. They were obtained by strict supervision of the examining students, since before examination they were compelled to take off their coats, roll up their sleeves over the elbow, and wash, with an at least 5 per cent. solution of carbolic acid, with soap and nail-brushes. Such strong carbolic lotions should be ready-made in every clinique, since students, in preparing the lotions themselves, almost always use too weak a mixture. For this reason the statement of the Erlangen student referred to, that he had disinfected himself most carefully with a *carbolic lotion*, is not free from objection. It is certainly not quite accidental that the Erlangen case already referred to and two of our five cases were so-called "examination cases." These afford, as Spiegelberg correctly observes, the best example of the risk of too frequent examination—that is, they present an exceedingly large number of complications, since the examining candidates, who are anxiously determined that they should not overlook any peculiarity in the process of parturition, examine unnecessarily frequently, and thereby occasion injuries, whilst they certainly do not always perform accurate cleansing and disinfection of their hands before each exploration. We should, therefore, not be far wrong in making the assertion that the Erlangen student might have infected the patient even although he had not performed the post-mortem six days previously, for that the cadaver poison should actually have attached itself to his fingers for six days, in spite of careful daily cleansing, is very improbable. If all those who have to deal with a cadaver or a puerperal fever patient were to exclude themselves from further midwifery practice for a long period, they would need to do the same on every occasion of touching infectious

materials, whether a putrid carcinoma or the pus from an opened abscess. That such exclusion would lead to intolerable difficulties is plain. But these difficulties must doubtless be reckoned with if the view is really correct that every one that has to do with decidedly infectious materials cannot disinfect himself completely in quite a short period. But this view is not supported by the experience of the clinique in Breslau or of many surgical institutions. The author believes that it is only necessary that the operator, be he surgeon or obstetrician, possess the necessary familiarity and acquaintance with antiseptic details and is convinced of their value. One must, as Volkmann points out, in any case in which he has to deal with infectious materials, *immediately* undertake a thorough washing with soap and nail-brushes, in a strong—*i.e.*, about 5 per cent.—carbolic lotion, and especially must observe careful cleansing of the roots of and parts under the nails, so as to prevent in this way putrid materials from drying in or being imbibed into the deeper layers of the epithelium. . . .

## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

**ADMINISTRATION OF ASPIDOSPERMINE.**—This active principle of quebracho bark, which has lately acquired some reputation for the relief of difficult breathing attending asthma, emphysema, phthisis, etc., is given in doses of about one-third of a grain; the dose of the bark being about half a drachm. Eulenberg gives, in the *Medicinal Kalendar for 1883*, the following formula for its exhibition:—

Aspidospermine, gr. xv.

Distilled water, ℥ss.

Sulphuric acid, q. s.

to make a solution. M. Dose, 15 minims.—*New Remedies*, March 1883.

**EUCALYPTUS IN WHOOPING-COUGH.**—Dr Whitthauer reports four cases of pertussis, treated with tincture of eucalyptus globulus, which recovered in a little over three weeks. The dose for children from two to four years of age was 5 to 8 drops. One of the patients, eighteen months old, suffered from well-marked rickets. After taking the eucalyptus for four weeks, not only was the whooping-cough cured, but the enlarged epiphyses were reduced, and the child, who had never before attempted to stand on its feet, learned to walk (*Memorabilien*, 15th Nov. 1882.)—*The Therapeutic Gazette*, May 1883.

**SANGUIS BOVINUS EXSICCATUS.**—I believe this article to be an excellent remedy when the following conditions are present:—In all stages of consumption. Not that it is in any sense a specific



for that much-dreaded disease do I mention it in this connexion. I do not believe we have, or ever will have, such a specific. But in the early stages, or during the early manifestations of this disease, we find the most benefit from its use. It certainly has given me more satisfaction than any other single remedy or combination of remedies. In anæmic girls it seems to be of service in supplying to the system just that material which it needs. As amenorrhœa is one of the accompanying evils of this state of affairs, I believe it to be directly benefited by this agent. In all cases of exhaustion following long periods of sickness this remedy seems to be specially indicated. It forms an excellent tonic, so called, in all of these cases. In obstetrical cases where there has been profuse hæmorrhage it supplies directly the loss. The same prevails in loss of blood from accidents. It seems to me to be indicated in scrofulous children. These are only a few of its many uses (F. W. Putman, M.D.)—*Therapeutic Gazette*, May 1883.

**CANNABIS INDICA.**—This is a most excellent nervine tonic, very valuable in cases of hæmorrhage and after confinement, where there is loss of rest, and in all cases of nervous insomnia in women. The proper dose is five minims of the tincture three or four times a day. I have never observed any disagreeable effects from it in the above doses (J. D. Cronin, M.D.)—*The British Medical Journal*, June 1883.

**NITRITE OF AMYL IN SPASM OF THE GLOTTIS.**—Dr Joseph Williams of Boston caused almost immediate arrest of stridulous respiration in an infant suffering from glottic spasm by administering slowly ten minims of amyl nitrite (*Canad. Med. and Surg. Journal*).—*New Remedies*, March 1883.

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### PERISCOPE OF OTOTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

**THE PROGNOSIS AND TREATMENT OF OTORRHŒA** (*Considerations sur le Pronostic et le Traitement de l'Otorrhée*), by Dr Shiffers, Assistant in the University of Liège: Liège, 1880.—This monograph, though not a new publication, contains some truths which should be placed before the eyes of physicians from time to time. That singular error, that the suppression of an otorrhœa is attended with danger,—viz., that by stopping it there may ensue consecutive cerebral diseases,—is still believed and acted upon by a number of physicians. The author of this brochure endeavours to show by irrefutable facts, based on anatomical and clinical observation, that physicians holding such views are guilty of either culpable ignorance or indifference, and to them he addresses himself. The author then



reports a case observed by him, in which a chronic purulent catarrh of two years' duration had been treated by nothing but warm water syringing. This had induced the growth of granulations and polypi in the ear, which interfered with examination of the fundus, and also suppuration in the mastoid cells. A deep incision behind the ear was followed by an escape of pus from the wound, and recovery ensued. The prognosis in chronic otorrhœa necessarily varies with the nature of the disease, of which it is only a symptom. In any case this disease demands attention, because of the intimate relation between the middle ear and organs of capital importance, such as the brain, the carotids, and the jugulars, to which the inflammation may spread. In addition to these local lesions, others of grave import may ensue, since chronic purulent catarrh of the middle ear may assume the nature of an osseous abscess, and become the determining cause of a pulmonary or a general tuberculosis. Von Trötsch is quoted as having said that those subjects afflicted with chronic otorrhœa never attain old age, and several English insurance companies decline to insure those with this disease. In treating these cases, reliance must not be placed entirely on local or on general treatment. The latter should be a combination of medical and hygienic treatment. To bitter tonics and ferruginous preparations there should be joined an extended hygienic and hydropathic treatment, which latter in some instances has excellent effects. The local treatment set forth in this brochure consists chiefly in the use of the syringe and instillations, the latter being those best known, no new forms being suggested. The insufflation of powders is limited to those cases in which the discharge is slight and the opening in the membrana tympani large. —(Review in *The Revue Mensuelle de Laryngologie, d'Otologie, etc.*, No. 6, 1882), *American Journal of Otology*, No. 4, Vol. iv.

TONSIL-DEAFNESS (*Étude sur la Surdit  Amygdalienne*), by Dr Noquet ; reviewed in *Revue Mensuelle de Laryngologie, d'Otologie, etc.*, No. 6, 1882.—An increase in size in the tonsils is very often attended with deafness. This increased development may be due to the presence of tumours of different kinds, as cysts, fibromata, gummata, syphilitic tubercula, lymphadenomata, lympho-sarcomata, and cancers. But these tumours are rare, and the enlargement of the tonsils is usually due to simple hypertrophy, and it is during the course of this affection that disturbances in the hearing are observed. Dr Noquet draws attention to the fact that naso-pharyngeal catarrh and chronic coryza, augmented by the narrowness of the nasal fossæ, are often met in subjects affected with enlarged tonsils, and, as a rule, he asserts that generally when the tonsils are greatly enlarged the hearing is somewhat impaired. If hypertrophy of the tonsils has no effect on the hearing, it is due to the fact that the enlargement occurs so low down that the velum palati is not forced upward, and also that there is no simultaneous naso-pharyngeal

catarrh. How hypertrophied tonsils affect the hearing is not explained in the same way by all authors. Noquet's conclusions are as follows:—1. Hypertrophied tonsils favour the production of naso-pharyngeal catarrh, and not only excite it, but keep it up. This catarrh may obstruct the mouth of the Eustachian tube by concretions of mucus, by granulations, by the swelling of the mucous cushion, and by inducing an incomplete paralysis of the velum palati. It may also be propagated to the mucous membrane of the tube, which becomes thickened, reach the tympanic cavity, and then set up a simple chronic catarrh preceded by acute or subacute attacks or a chronic purulent otitis media, with all its consequences. 2. Tonsils very much enlarged near their upper part or on their antero-posterior surface interfere with the fixation of the velum palati. Consequently the external peristaphyline muscles can no longer open the tubes, and the air in the tympana becomes rarefied. This then becomes a cause of deafness, aside from the naso-pharyngeal catarrh, as soon as the catarrh has once been set up. This also occurs when the tonsils, affected with any form of pathological development, have pushed up the palate and separated the pillars of the pharynx, or when the neoplasm itself may have grown over the tubal orifice. These conclusions explain why, in some cases of hypertrophy of the tonsils, deafness exists only on one side. The prognosis varies according to the nature of the case. In simple hypertrophy without naso-pharyngeal catarrh, excision of the tonsils is followed by cure. In case the tube is obstructed, improvement will be rapid if the disease is recent, longer if the affection is chronic. If the catarrh shall have reached the tympanic cavity and have set up there either a simple or a purulent otitis media, the chronicity of the lesions, the labyrinthine complications, a large perforation in the membrana tympani, and the loss of the ossicles, will complicate the prognosis, which, furthermore, is subordinate to the neoplasm which has invaded the tonsil. Regarding the treatment, it may be said that when the hypertrophy is slight, and when the deafness is not great, the thermal treatment of Lawbron, whatever that may be, may be tried with good effect. But Noquet believes that when the organ of hearing is much involved, excision of the tonsils should be effected as soon as possible. But M. Noquet seems to have lost sight of the fact so well known to aurists, that enlarged tonsils are so constantly seen without consequent aural affections, while ear diseases and deafness are constantly seen without enlargement in the tonsils. In fact, in an experience based upon the observation of over three thousand individuals afflicted with ear disease, not one case has been seen by us in which it was even probable that the tonsils needed excision. Local treatment, and, above all, proper hygiene and the use of internal remedies, have always reduced the enlarged tonsil to a proper size. Excision of the tonsil has been relegated to the limbo of unnecessary operations by the wider studies of the aurist, who has had the best chance of



seeing a greater number of cases in which the enlarged tonsil would do harm, if it could, to the hearing. M. Noquet naïvely adds that, together with the operation of excision, which we admit is an impressive one to the patient and his family, "it will be indispensable to administer iodide of iron, cod-liver oil, cinchona wine (*vin de quinquina*), and to order salt and sulphur baths, and also, in some cases, to give mineral waters, and at the same time to institute a most careful hygiene." He might have added that such treatment would do away with the necessity of the surgical operation in almost all cases. The few exceptions would be in the case of tumours or malignant growths in the tonsil.—*American Journal of Otology*, No. 4, Vol. iv.

**CURABLE CONGENITAL OBSTRUCTION OF BOTH EUSTACHIAN TUBES**—OBSTRUCTION CONGÉNITALE CURABLE DES DEUX TROMPES D'EUSTACHE (*Revue Mensuelle de Laryngologie, d'Otologie, etc.*, No. 7, 1882).—Dr Thaulow reports the case of a boy, thirteen years old, regarded as a congenital deaf person, who consulted him for relief. The patient had never had scarlatina nor otorrhœa; his facial expression was that of a mute. Examination revealed narrow auditory canals and thickened membranæ tympani. After catheterization, accomplished with considerable force, the patient heard better, and after a treatment of six weeks, consisting in the air-douche and inflations with chlorohydrate of ammonia, the boy could distinctly hear the voice at a distance of a metre, and his face appeared much more intelligent. Dr Thaulow concludes that all children placed in institutions for deaf-mutes should be most carefully examined.—*American Journal of Otology*, No. 4, Vol. iv.

### OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

**NOTE ON DIAGNOSIS OF ECZEMA.**—"It is in general safe to say, never hastily decide that patch of cutaneous disease to be eczematous where you can take a pen or pencil and distinctly outline the involved area at every point."—"On Certain Cutaneous Affections of the Hands," by Dr Nevins Hyde, *Philadelphia Medical News*, December 9, 1882.

**REMOVAL OF FRECKLES.**—Shoemaker says that the careful application of a small piece of the ointment of the oleate of copper at night upon retiring will usually remove freckles. The oleate of copper ointment should be prepared by dissolving one drachm of the salt of the oleate of copper in sufficient oleo-palmitic acid to make a soft ointment.—*Journal of Cutaneous and Venereal Diseases*, April 1883.

**ERYTHEMA DIPHThERITICUM.**—Robinson describes a peculiar



rash as met with in some cases of diphtheria. The skin becomes affected under two conditions, viz., either in the early stages of the disease, or at a later period in some cases of severe blood-poisoning. In both the rash is erythematous, but differs in appearance and course. *Early Eruption*.—This appears sometimes at the commencement of the diphtheria, sometimes as late as the second or third day. It may occupy only a portion of the trunk or extremities, or may cover the greater part of the body. It is rarely seated on the head. At times the rash is not a diffused erythema, but presents a mottled aspect such as is seen in many cases of scarlet fever, but, in distinction from it, there is no marked elevation of temperature. The rash may commence in any region, and rarely extends over the whole body, the tongue is not affected, and there is no special disturbance of the general system. After lasting from 24 to 48 hours it disappears, without being followed by desquamation. *Rash of Septic Diphtheria*.—In some cases of septic diphtheria, where the blood is poisoned by absorption from the diseased mucous membrane, an erythematous rash appears, which presents many of the characteristics of erythema multiforme. It appears only when the diphtheria has already existed a few days. It occurs most frequently on the extremities, and next to these on the anterior surface of the abdomen. It begins as pinhead-sized, rose or bright red-coloured, erythematous spots, which spread circumferentially and assume the shape of rings enclosing a pale or cyanotic centre—erythema annulare. The eruption does not itch or burn, and its disappearance is not followed by desquamation. In fatal cases the rash continues till death. Both forms of eruption belong to the angio-neurotic diseases of the skin.—*Journal of Cutaneous and Venereal Diseases*, April 1883.

**SULPHUR TREATMENT OF ALOPECIA PITYRODES.**—Unna discovered the value of sulphur in baldness associated with pityriasis, from the effect produced by a pomade called philodermine, made in Paris by Demarson, Chatelat, & Co., and which, on being analyzed, was nothing else than a simple sulphur pomade with a minute quantity of oxide of iron and magnesia. The patient, 26 years old, had been since 14 affected with dandruff of the scalp. This was at first very considerable, but latterly, when the originally abundant hair had become markedly thinned, had grown less. There was decided itchiness, but no headache. The hair had fallen off on the temples and above the forehead in particular, and in these situations the scalp was less movable than elsewhere. A fortnight's use of the above-mentioned pomade sufficed to remove the itching and scurf, and after its employment for some months, not only did the scalp remain free from scales, but the shedding of the hair grew normal and the hair itself became thicker. An imitation of this high-priced pomade was made by mixing one drachm of precipitated sulphur with ten drachms of prepared lard. Cases of commencing

psoriasis capitis are rapidly benefited by the use of this, and are cured by its continued employment. The hair is to be parted, first in the sagittal and then in the coronal direction, at successive intervals of one centimetre (half an inch), and the sulphur ointment is to be gently rubbed into each division. Each third or fourth evening the head is to be cleansed from the remains of the salve. The salve is to be applied at first every evening, but as the scaliness lessens, usually in a week, the inunction is only to be made every second night. By the third or fourth week twice a week may be sufficient, and after a month or two has passed, once a week. In this way it is gradually discontinued. Every fourteen days the combings are to be collected and the hairs arranged, so far as possible, with the roots one way. In this way the amount of loss can be compared, and the condition of the roots examined. These latter, at first wasted, become in time plump and normal. This treatment is applicable not merely to commencing cases, but even when there has occurred considerable thinning of the individual hairs.—*Monatsshefte für praktische Dermatologie*, December 1882.

ACNE KELOID.—Under this name Mr Marrant Baker has related short accounts of two cases, which are apparently identical with the disease described by Kaposi as dermatitis papillaris capillitii. The disease begins usually on the nape of the neck as small tubercles, which bear at first sight a close resemblance to those of acne vulgaris, yet differing from these. Each tubercle seems to be composed of soft unbroken red scar tissue, the summit being perforated by a hair. By the confluence of several of such tubercles a larger and somewhat prominent lump is produced, and from its surface bundles of hairs project at intervals. These hairs seem to spring from a lower level, and to pass through the substance of the tumour without being embraced by it very closely. The intervening spaces are bald. The surface is smooth and dark red, but not ulcerated or excoriated. The growth was removed in one case by the application of fuming nitric acid.—*Transactions of Pathological Society of London*, 1882.

EPIDERMIC MEDICATION WITH THE OLEATES.—By this is meant the application of these remedies to the unbroken skin for the purpose of obtaining local or constitutional effects. The skin absorbs oleic acid and alkaloid salts dissolved in it with peculiar facility. Oleic acid combines with the various medicinal alkaloids in very large proportions, taking up from 50 to 69.6 per cent. The ordinary oleates, therefore, are weak solutions of oleates of atropia, aconitia, etc., in excess of oleic acid. In some rare cases, where this excess of acid is irritating, a bland oil may be added. If one drop of the oleate of aconite, which contains 1-60th of a grain (the strength of the oleate being two per cent.), be rubbed over half a square inch of skin, a glow of warmth is almost instantly felt, which disappears in half an hour. If twice this quantity be



applied, there will be prompt tingling in the nerves of the part, followed by a sense of heat and prickling, and then numbness, lasting an hour. Five minims of the oleate of atropia, containing also two per cent. of alkaloid, applied to the knee-joint produces dilatation of the pupil in a short time. This oleate, rubbed upon the skin and covered with oiled silk or gutta-percha tissue, acts very much like a good belladonna plaster. There is considerable evidence that a five per cent. oleate of morphia, applied to the skin of the abdomen of children, and covered with oiled silk, acts well and produces little gastric disturbance or constipation.—*Medical Record of New York*, January 20, 1883.

PEMPHIGUS FOLIACEUS CURED BY THE CONTINUOUS AND INDUCED CURRENTS.—De Amicis relates a case where the pemphigus was localized on the inner surface of the right leg. The nutrition of the part had suffered; there was marked emaciation; muscular contraction kept the limb half flexed; the skin was covered with thick flakes of epidermis coloured greenish yellow; beneath this the surface was either rose or dark red; here and there were blisters and denuded points. Various methods of treatment, both local and constitutional, had been tried without effect, such as arsenic, iron, quinine, continuous warm baths, emplastrum diachyli, ointment of chrysophanic acid, etc. De Amicis prescribed electricity under the form of alternate induced and constant currents. The seances lasted about ten minutes. The results exceeded all expectation. After less than twenty-six sittings all new eruption of bullæ had disappeared. Soon the affected limb had regained its former size, the contraction ceased, the skin recovered its natural hue, and the flakes which fell off were replaced by a branny desquamation. The patient unfortunately resolved to leave the hospital before the cure was complete.—*Annales de Dermatologie et de Syphilitigraphie*, March 1883.

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## QUARTERLY ABSTRACTS OF PAPERS ON THE DISEASES OF CHILDREN.—No. II.

By J. MILNE CHAPMAN, M.B., M.R.C.P.E. (by exam.), M.R.C.S.

[These Abstracts will chiefly be taken from American and Foreign Periodicals.]

MORBID CHANGES OF THE THROAT, LARYNX, AND AIR-PASSAGES IN SOME ACUTE INFECTIOUS DISEASES, by Dr E. Löri, Budapest (*Jahrb. f. Kinderh.*, xix. 1).—In measles, 12–36 hours before the appearance of the skin rash, there is a diffuse or macular hyperæmia of the mucous membrane of throat, larynx, and air-passages, diffuse usually in the mouth, macular on the tonsils and back of the throat. Within twelve hours from the appearance of this hyperæmia there occur small papules, first on the palato-glossal folds. About the time that the skin eruption appears there is pro-



fuse catarrh of pharynx, larynx, and trachea, with rapid shedding of epithelium, and frequent formation of superficial erosions. In the trachea the swelling around these latter may give rise to stenosis. According to the writer, the appearance of such ulcers in the larynx augurs the occurrence of tuberculosis. In scarlatina the throat is affected 12-36 hours before the outbreak of eruption. The writer states that there is often a sudden disappearance of the affection of the mouth and pharynx coincident with the eruption on the skin coming out. Frequently the eruption in the mouth closely resembles that found with measles. In rubeola there is also hyperæmia, diffuse or spotted, of the larynx and trachea. In smallpox the mouth is affected at the same time as the skin. The pustules are small and imperfectly filled, dry up in two or three days, and in six days are only represented by red spots. Bleeding from them is very common. The writer recommends the use of ice poultices round the neck, ice internally, and such astringents as tannin applied after puncture of the pustules. In chicken-pox there occurs either diffuse hyperæmia of the mucous membrane, or a few scattered pustules. In typhus and typhoid, acute catarrh of the pharynx, larynx, and trachea is of frequent occurrence, and often proceeds in the larynx to the formation of ulcers, which have little tendency to heal, and occasionally, about the sixth or eighth week of the disease, cause perichondritis. For this latter condition, "when diagnosed with certainty," the writer recommends tracheotomy as early as possible. In whooping-cough there is usually some catarrh of larynx and trachea, and bleeding from the mucous membrane is frequent. The appearance, during the course of whooping-cough, of ulcers in the larynx the writer regards as very suspicious of the onset of phthisis.

THE LOCAL TREATMENT OF DIPHTHERIA, by S. Korach (*Deutsche Med. Wochens.*, viii. 36).—The writer records the results of his treatment of 112 cases by iodoform, and asserts that this is infinitely the best local application for diphtheritic patches. He used the following solution, painted on six times daily :—Iodoform, 2·5 grammes ; æther, 25 grammes ; balsam of tolu, 5 grammes.

ON "TRACHELEMATOMA," OR CIRCUMSCRIBED SWELLING OF THE STERNO-CLEIDO-MASTOID IN INFANTS, by Dr Tordens, Brussels, (*Archiv f. Kehlk.*, Bd. iv. 5-6).—The writer believes that more cases of this affection occur than are noticed, and explains this through the innocent nature of the affection in many cases. The majority of reported cases occurred in infants of under five months of age. The most frequent cause is obstruction to the circulation of the neck during delivery, occasioning rupture of vessels and extravasation of blood, part of which becomes absorbed, while the remainder causes inflammatory action around itself. Syphilis, by causing degeneration of the vessels, may predispose to the occurrence of this affection. The swelling is oftenest found on the right side.

Its form and size varies, the average for the latter being about three-quarters of an inch in length. The consistence is firm and sometimes elastic, and the skin covering is rarely involved. There is usually complete absence of pain. In a few cases the writer noticed turning of the head towards the affected side. The duration of the swelling varies from a few weeks to several months, and the usual termination, whether with or without treatment, is in complete recovery. It may happen that from the persistence of a twist in the neck some orthopædic apparatus may be required. Fifteen cases are collected and described.

THE USE OF THE COLD DOUCHE IN OPHTHALMIA NEONATORUM, by Dr Paulsen (*Berlin. Klin. Wochft.*, 1882, No. 22).—This writer recommends the use of a cold injection against the eyelid as a means of getting rid of the pus in this troublesome affection. He employs it at first for two minutes four times an hour, and afterwards every half-hour. The effect is to cause opening of the eyes, and thus to permit of complete washing away of all secretion. Thereafter, pencilling with nitrate of silver, or any other means of treatment, may be employed. He advises that the water be not used quite cold at first, and that a little sea salt be added to it.

FURTHER COMMUNICATION ON RETROPHARYNGEAL ABSCESS AND INFLAMMATION OF THE RETROPHARYNGEAL LYMPHATIC GLANDS, by J. Aleny (*Jharb. f. Kheilk.*, xvii. 2 and 3).—The writer is assistant to Prof. Bokai, who wrote at length on the above subjects in 1876, and the present articles are in continuation of the former papers. 60 cases of abscess and 20 of inflammation of the glands, all of which fell under Prof. Bokai's observation, form the groundwork of the article.

MYOCARDITIS AFTER DIPHTHERIA, by Professor Leyden (*Deutsche Med. Wochenschrift*, 1882, No. 7).—Three cases are related where death followed the development of cardiac symptoms during diphtheria, and where microscopic evidence of myocarditis was found in the presence of small deposits in the muscle substance and new cell growth around the blood-vessels. Associated with this there was dilatation of the heart, and the writer points out that as this predisposes to the formation of thrombi, the latter condition may at first sight be assumed as the cause of death, while in reality it is only dependent on the inflammatory action in the heart substance. He further suggests that in other infectious diseases a similar process may take place and that it may similarly be misunderstood.

HÆMORRHAGE OF THE THYMUS, Raudnitz, Prague (*Archiv f. Kheilk.*, Bd. iv. Hft. 1 and 2).—Two cases are related. In the first, a child aged one month, there were sudden symptoms of internal hæmorrhage with coincident blood-staining of the border of the gums, and death supervened in twenty-four hours. The



second case lasted ten days and presented similar symptoms. In both the thymus was found to be the seat of hæmorrhage, and in both there were sufficient grounds for the diagnosis of congenital syphilis. The causes of such a condition are stated by the writer, after Eppinger, to be—1, mechanical; 2, hereditary syphilis; 3, sepsis; 4, hæmophilia. Full references to the literature of the subject are given.

**TUBERCULAR MENINGITIS**, by Ledeser Vienna (*Jahrb. f. Kheilk.*, xix. 2).—Most of his cases presented no traces of previous scrofula, but were, on the contrary, well nourished and of healthy appearance. Nor could he blame unhealthy homes or upbringing, as many of them occurred in the best regulated families. In all of them, however, with the exception of four, he was able to ascertain that one or other of the parents or some of the near relatives suffered from tuberculosis, most frequently of the lungs. He seldom noticed convulsions as the first indication of the disease; more generally there was vomiting. In one case there was a period of apparent quiet lasting several months, but the average duration was two to three weeks. The differential diagnosis is gone into, and in regard to prognosis the author holds with Steiner and others that this should not be always absolutely unfavourable.

**BIEDERT'S CREAM MIXTURE**, Martin (*Ibid.*, xviii. 2 and 3), and Closet (*Berlin. Klin. Wochenschrift*).—Both writers highly praise this mixture as a substitute for mothers' milk, Martin saying that while it is cheaper than a wet-nurse it is also better. The following is the formula for the No. 1 mixture:—One-eighth of a litre of cream, three-eighths of a litre of boiled water, and fifteen grammes milk sugar.

**DIARRHŒA AMONG INFANTS**, by Dr Jules Simon (*Gaz. des Hôpitaux*, 1883, Nos. 19–24).—Among other forms of diarrhœa, the writer alludes to the cerebral, and says, "Diarrhœa may assume a cerebral form,—that is, it may be accompanied by certain cerebral phenomena or by eclamptic convulsions, even although the diarrhœa may be but slight. As a result of a profuse drain, a comatose condition may be developed. Again, meningeal symptoms may develop and meningitis be simulated." Many of the reported cases of meningitis with recovery are, the writer thinks, only cases with meningitic symptoms. The various forms of diarrhœa are discussed in detail. For the treatment of cholera infantum the writer recommends, 1st, preventive measures to be adopted during the premonitory catarrhal stage, and 2nd, after the full development of the affection, alcohol internally and externally, and mustard baths.

**NOTE ON THE IMPROVEMENT OF HUMAN MILK WHEN OF INFERIOR QUALITY**, by Dr Delattre (*Ibid.*, No. 29).—The writer strongly recommends that nursing women, especially those living in large



towns, should take Dusart's syrup, or wine of the lacto-phosphate of lime, and he cites cases where it has proved of great value when given for some time before confinement to women who had on former occasions made bad nurses.

SKIN DISEASES OF INFANCY, by Dr Greffier (*La France Médicale*, 1883, No. 5).—The author does not include in his paper the skin eruptions of the exanthemata nor, for a like reason, of syphilis. There remain over—1st, Affections of local causation, being in the majority of instances the results of carelessness, of allowing too long contact with urine or fæces, or of the presence of parasites, and their treatment is to be regulated according to the cause; 2nd, Affections of constitutional causation, which are again divided into *a*, Dependent upon lymphatic (strumous?) disposition, some cases of simple eczema, impetigo, lupus. In the constitutional treatment of such cases the author lays stress on the avoidance of too highly nitrogenous a diet. *b*. Herpetic eruptions, for which is recommended Fowler's solution and mild alkaline preparations internally. *c*. Prurigo and lichen, which the writer thinks have been clearly shown to be of nervous origin, and which yield most readily to hydropathy and the use of the bromides.

ON A PUPIL PHENOMENON OBSERVED IN CERTAIN PATHOLOGICAL CONDITIONS OF INFANCY, by J. Parrot (*Revue de Médecine*, Oct. 1882).—The writer has noticed that in several children affected with acute diseases of the brain or its membranes, while they were in a comatose condition, if he pinched the skin of the epigastrium sharply the pupil suddenly and decidedly widened, sometimes to a size thrice that of what it originally stood at, and he argues that while the general sensibility is lost the sensibility of the skin may remain. He explains the phenomena on the supposition that it is reflex through anæmia, in consequence of the skin irritation, resembling the mydriasis resulting from a deep inspiration. The cases he relates are as follows:—6 of tubercular meningitis (3 with, 3 without, post-mortem demonstration), 4 of hæmorrhage into the pia mater, (2 with P.M.'s), 3 of hydrocephalus, and 2 in which no cerebral lesions were found. He relates seven cases of various diseases other than of the brain, where, during the state of insensibility preceding death, he was unable to elicit the phenomenon. The writer gives the following conclusion:—"A child, with or without convulsions, which is in a state of coma, and whose pupils do not react on sharply pinching the epigastrium, is neither affected with tubercular meningitis nor with hæmorrhage into the pia mater. It is in an advanced state of asphyxia, and its death is imminent."

TREATMENT OF WHOOPING-COUGH, by Dr Archambault (*Gaz. des Hôpit.*, No. 28, 1882, and *Progrès Méd.*, Nos. 48-52, 1882).—The writer strongly recommends that children suffering from this disease should be kept indoors, and that special attention should be paid to the temperature of the rooms they occupy being kept uniform. He states that by means of such precautions "it is

almost certain that such lung complications as capillary bronchitis and broncho-pneumonia may be prevented." In support of his advice he points to the fact that summer attacks of the disease are always milder than those occurring in winter. The drug he recommends is sulphate of atropine, 1-1000, one drop thrice daily for children a year old, two drops for two-year old children, and so on.

**SYPHILITIC HEPATITIS IN CHILDREN**, Engel, Philadelphia (*Am. Journ. Obst.*, Jany. 1883).—The writer summarizes the following as essential points in regard to the diagnosis of the above affection:—  
1. A history of the case like this:—The child having been for a long time occasionally unwell, without this being attributed to any special known ailment. 2. The peculiar colour of the skin, and the somewhat cachectic appearance of the child, which otherwise seems to be in good health. 3. Ascites with the following peculiarities:—Gradual development, and the absence of any of the usual causes; no tubercular peritonitis, no cancer, etc.; absence of pain; almost no tenderness; and no hæmorrhage from either nose, stomach, or intestines. After paracentesis, liver very much enlarged, smooth margin and hypertrophied spleen. 4. The accompanying dyspepsia, but utter absence of any other symptom. 5. The rapid success of antisypilitic treatment. 6. The peculiar fact that all cases of diffused hepatitis due to hereditary syphilis so far reported happened in girls.

**HÆMOPHILIA**, by Dr Thos. D. Dunn (*American Journal of the Medical Sciences*, January 1883).—The writer reports a number of cases of this disease, and draws some interesting conclusions. Thus he shows that sex is an important predisposing cause in hæmophilia, females being much less prone to the disease than males, and in women, also, the danger to life is much less marked; the females, however, of bleeder families, even though themselves exempt from the disease, are much more apt to transmit the tendency to hæmorrhage to their children than are the males, even when themselves bleeders. Dr Dunn also points out that there are three forms of the disease:—1. The aggravated form, in which there is a tendency to severe spontaneous, traumatic, and interstitial hæmorrhages, associated with swelling of the joints. This form, seldom seen in females, generally lasts throughout life, and usually is the cause of death. 2. The intermediate form has no tendency to the joint affection or traumatic hæmorrhages, but frequent spontaneous ones from mucous surfaces and subcutaneous ecchymoses. This form frequently disappears at puberty. 3. The third form is lowest in degree, and seen only in females; it manifests itself in ecchymoses, and in early and prolonged menstruation.

**BISMUTH AS A SPECIFIC FOR CANCRUM ORIS**, by C. J. Macguire, M.D., New York (*N. Y. Med. Record*, 3rd Feb. 1883).—The author had under his care 24 cases of this affection, in most of them the disease having followed measles. As to the accuracy of his diagnosis, he is careful to guard himself by giving the testimony



of other physicians. Four of his cases were fatal, and those four before he instituted the bismuth treatment, but under this treatment all of the remaining 20 recovered, though many of them were cases apparently hopeless. Such a percentage of recoveries, the author justly remarks, has hitherto not been met with. His method of using bismuth, and the progress of some of the successful cases, may be given in his own words:—On May 11th I was informed, upon my entrance to the ward, that still another child was, in the words of the sister, “getting the frightful disease in the mouth.” This child, Katie H., aged seven years, I examined, and found she had a small ulcer on the inside of the left cheek, with all the characteristics described in the early stages of the other cases. I confess I was in despair. On consideration, I came to the conclusion that following in the old rut of treatment was almost useless, if not quite so. By a process of reasoning, or by accident if you will, I conceived the idea of applying locally the subnitrate of bismuth. After thoroughly cleansing the mouth with a disinfectant lotion, I covered the ulcerated surface with this drug, and the next day, May 12th, the grayish slough had partly cleared away, and the fetor, which had been most disagreeable, was sensibly lessened. The hardness of the cheek, if not less, had not increased, and the child was not so thirsty. Temperature, 99° F.; pulse, 90. Gum on upper jaw reddish purple, soft and tender. Mouth washed out with solution of carbolic acid; bismuth applied every three hours; syr. ferri iodid., cod-liver oil, and generous diet. May 13th.—Fetor markedly less. May 14th.—Much better, sleeps well, ulcerated parts getting a healthy appearance. From this date to the 1st of June, when she was discharged thoroughly cured, the patient did well. On May 12th, after witnessing the happy change effected by the bismuth in the case of Katie H., I determined to try its efficacy on Arthur W. and Nellie H., both of whose cases we looked upon as hopeless. On May 10th I had removed some teeth, together with a large piece of the superior maxilla, from Arthur W. His cheek was then swollen tense, a large black gangrenous ulcer was on its inside surface, and his eye was nearly closed. The stench from him was intolerable. Usual disinfecting and supporting treatment continued. May 11th.—No change. May 12th.—Filled up cavity in cheek with bismuth, first cleansing it out well with disinfectant wash, and repeated every three hours. May 13th.—No marked change, except odour a little lessened. May 14th.—No increase of gangrenous erosion. Treatment continued. Separation of a large mass of grayish black slough from ulcer on cheek and cavity whence exfoliated bone was removed. Parts looking healthier, fetor less. May 18th.—Fetor nearly disappeared in toto! Takes food freely; sleeps better; ulcer assuming a very healthy appearance; swelling and hardness of the tissues of the cheek rapidly subsiding. May 25th.—Ulcer on inside of cheek quite filled out and granulating kindly. Removed small piece of dead bone from superior maxilla. Otherwise



doing well. Treatment continued. From this date to July 1st, when discharged cured, the patient did excellently well. Since then he has been taking cod-liver oil, and is now in perfect health. Nellie H. ran the same course, up to May 12th, as the two preceding. Her condition at that time was identically the same—black gangrenous slough on buccal mucous membrane, swelled cheek, etc. Applied treatment as in the last case. May 13th.—Clipped away with scissors a considerable amount of disintegrated tissue, then packed parts with bismuth. Continued treatment to 17th, when I removed a large piece of exfoliated bone and several teeth from inferior maxilla. From this date to June 15th she slowly but steadily improved, the bismuth being regularly applied, and the mouth thoroughly syringed. Iron, cod-liver oil, and generous stimulating diet administered. She is now one of the healthiest children in the institution, though showing the loss of hard and soft tissue, but *not* showing the horrible deformity which formerly cases that recovered under ordinary treatment suffered from.

#### CASES.

"Note on a case of 'Tic de Salaam,' Eclampsia Nutans, or Salaam Convulsion," Gautiez, *La France Méd.*, 1883, No. 17.

"Congenital Syphilis with Cerebro-spinal Fever," Chapin, *Am. J. of Obstet.*, Feb. 1883.

"Complete Extrophy of the Bladder in a Young Girl," Berger, *Gaz. des Hôpitaux*, No. 21, 1883.

"Case of Acardius Amorphus (Amorphus Fœrster)," Kroner and Schuchardt, *Virchow's Archiv*, Bd. xc. Hft. 3, p. 443.

"Congenital Unilateral Hypertrophy of the Face," Ziehl, *Ibid.*, xci. 1.

"Congenital Stenosis of Pulmonary Artery, Defect of the Ventricular Septum, with Persistence of the Ductus Arteriosus, recognised during Life (with P.M. Report)," Nicolaieff, *Wratsch*, in *Archiv f. Kheilk.*, iv. 4.

"Partial Defect of the Diaphragm, with Protrusion of Bowel," *Ibid.*

"Case of Meloncelie, with Note," *Gaz. des Hôpit.*, 1882, No. 13.

"Sclerodem Neonatorum, with Observations," Lotenhoefer, *Breslauer ärztliche Zeitschrift*, iv. 24.

"Primary Sarcoma of the Mucous Membrane of the Front Vaginal Wall, with Secondary Sarcoma of the Bladder," Soltmann, *Jahrb. f. Kheilk.*, xvi. 3 and 4.

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#### PERISCOPE OF LARYNGOLOGY.

By G. HUNTER MACKENZIE, M.D., and J. MAXWELL ROSS, M.A., M.B.

MALIGNANT DISEASE OF THE TONSIL.—Dr MacNeill Whistler directs attention to a case of typical carcinomatous disease of the

tonsil, which he removed by means of the ecraseur. The immediate result of the operation appeared to be successful, but eight weeks subsequently the disease commenced to recur. No benefit followed the administration of Chian turpentine. The patient subsequently underwent a second operation at the London Hospital, when the right common carotid artery was tied, and the diseased structure removed by operating through the mouth with the galvano-cautery, and by free cauterization with the thermo-cautery. Recurrence of the disease again took place in about the same period as before, with marked implication of the right side of the tongue, and increase in size of a swelling which some time previously had commenced to form on the opposite side of the mouth, in close relation to the left superior maxillary bone. The latter was now found to be of an undoubtedly malignant nature. In view of the results obtained in this and other recorded cases, Dr Whistler asks the question, "how far operative interference is advisable when dealing with such cases." He concludes that in the earlier stages of the disease an operation may be justifiably undertaken for the relief of urgent symptoms; but in the latter periods, when, for instance, there is very extensive ulceration, there appears to be no indication for the removal of the parts. Palliative measures are the only ones to be then resorted to.—*Medical Times and Gazette*, 1883, Vol. i. p. 579.

OBSERVATIONS ON OCCLUSION OF THE POSTERIOR NARES AS A RESULT OF NASAL CATARRH.—In this communication Dr MacCoy deals with the *hypertrophic* variety of chronic nasal catarrh. He shows that in this form of the disease the hypertrophic changes are most clearly defined in those portions of the nasal passages where the erectile tissue, first described by Kölliker, is most abundant—over the turbinated bones and the vomer. This can best be detected by posterior rhinoscopy. The symptoms are those usually associated with nasal obstruction, accompanied by a profuse serous discharge, sneezing, and attacks of asthma, especially if polypi be present. The treatment is essentially *surgical*, and consists in the removal of the hypertrophic portions by means of Jarvis's snare, and the subsequent use of the galvano-cautery to remove what general hypertrophic condition remained, to which the snare was not applicable. To avoid secondary disturbances there are certain requisites, viz.:—1. A battery in perfect condition; 2. A very thin cautery knife; 3. Perfect adjustment to the part to be destroyed; 4. Contact of but a few seconds; 5. Thorough application of an antiseptic fluid to the parts cauterized.—*Medical News* (Philadelphia), Vol. xlii. p. 379.

THE BACILLUS TUBERCULOSIS IN THE DIAGNOSIS OF TUBERCULAR ULCER OF THE LARYNX.—B. Fränkel (*Berliner Klinische Wochenschrift*, 22nd January 1883) has sought to determine the value of the bacillus in the diagnosis of tubercular laryngitis. He believes, contrary to the opinion of many laryngologists, that in the majority



of cases tuberculosis of the larynx can be diagnosed by means of the laryngoscope, but admits that in a certain number of cases such a diagnosis is impossible. Here it is that Koch's discovery becomes of service. By means of the laryngoscope and a brush, small portions (of secretion?) are removed from the ulcer. By examination of these we can determine with absolute certainty the tubercular nature of a laryngeal ulcer. A negative result should not be credited unless the examination has been repeated at least three times.—*Medical News* (Philadelphia), Vol. xlii. p. 391.

**LARYNGEAL ACCIDENTS OF LOCOMOTOR ATAXY.**—In a lecture by M. Dreyfus-Brisac, attention is called to those cases of locomotor ataxy in which the larynx seems to be primarily or principally affected, although the laryngeal symptoms assume very dissimilar forms. They may be reduced, according to MM. Fournier and Cherchevsky, to three principal types of varying intensity, from a slight cough to a most formidable attack of laryngismus. The most serious type presents the same clinical features as spasm of the glottis, respiration being completely suspended, and the patient suddenly falling into a state of complete apnoea. These laryngeal spasms, by reason of the passive cerebro-spinal congestion which they induce, seem to have a predominant part in the causation of apoplectiform seizures. They may have a fatal termination, either by sudden death or by slowly progressing asphyxia. In the great proportion of cases, however, the spasm is suddenly arrested without leaving any traces after it, proving that these disorders are purely functional. The laryngeal phenomena have, like all the visceral manifestations of locomotor ataxy, a distinctly intermittent character, and no special absolute laws can be laid down regarding the frequency or progressive gravity of the attacks. They may appear at any period of the malady, but statistics would seem to show that in about one-half the recorded cases they appear at the *début* of the affection, and often months and even years pass before the other habitual symptoms of ataxy supervene. As a premonitory symptom, these laryngeal accidents should be ranged amongst the possible signs of tabes, and may aid in arriving at a diagnosis; occurring late in the disease, they indicate a grave prognosis, in the sense that they reveal a functional derangement or an organic alteration of the bulb.—*Medical and Surgical Reporter* (Philadelphia), Vol. xlviii. p. 281.

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## Part Fifth.

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### MEDICAL NEWS.

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#### THE MEDICAL ACT AMENDMENT BILL.

A LARGE and representative meeting of members of the profession resident in Edinburgh and the surrounding district was held in the



hall of the Royal College of Physicians, on the afternoon of Wednesday, May 30th, 1883, to consider the effect which the Bill before the House of Commons is calculated to produce upon medical education in Scotland.

Dr G. W. BALFOUR, President of the Royal College of Physicians, was called to the chair. Apologies for absence from several gentlemen—among others, Professors Fraser and Struthers—were intimated. Professor Fraser stated that he and his colleagues had resolved not to attend, not from any lack of interest in the subject, but because of their sympathies not being likely to be in accord with those of the meeting. He thought their presence would not advance the interests of medical education and of the profession in Scotland.

The CHAIRMAN then shortly explained that the purpose for which the meeting was held was to have opinions expressed regarding the Bill before the House about to be read a second time. The principle of the Bill was simply that the lowest license to practise should be a guarantee of a full and complete medical education in the three departments of practice, surgery, medicine and midwifery. As this had been the principle on which the corporations had long acted in regard to their diplomas, they had not a single word to say against it; but when they came to the provisions made for carrying out this principle there was considerable difference of opinion, and considerable room for amendment of the Bill as it now stood. As they knew, it was proposed to constitute three Medical Boards, one for each division of the kingdom, and these Boards were to be elected by the corporations and the universities. In England, the corporations were to have eight representatives and the universities eight; in Ireland, the corporations were to have five and the universities six; in Scotland, the universities were to have eight and the corporations three. This seemed a very unfair thing, and threw a gratuitous insult upon the corporations which had done so much for medical education. Speaking for his own College, there was not a medical charity in Edinburgh which did not owe much to the Royal College of Physicians. Even the Royal Infirmary was, in the first instance, founded and chiefly supported by Fellows belonging to it. Their claims had been allowed to such an extent that none but members of the College were allowed to become physicians to the Royal Infirmary. Ever since he had been connected with the College, he could say they had maintained a high standard at their examinations, and at the present moment their average pass was as high as that of any other licensing body in the kingdom.

Dr JOHN SMITH moved the first resolution:—"While approving generally of the principles of the Medical Act Amendment Bill, this meeting is of opinion that in the constitution of the Medical Board for Scotland the representation proposed to be assigned to the corporations is quite inadequate, and ought to be increased." In supporting the resolution, he regretted the absence of Dr P. H.

Watson, who was to have proposed it, but had been unavoidably called away shortly before the hour of meeting. He ventured to think that the resolution was one which would commend itself to every one present as worthy of acceptance. The Boards were to be entrusted with the supervision and regulation of medical education and examinations in each part of the kingdom. They were to supervise schools and teachers and licensing bodies, and, through the Council, might deprive any of the present licensing authorities of their powers of licensing. The Boards sent eight representatives to the Council—four from England, and two each from Scotland and Ireland. In addition to this, it was perfectly possible that the whole of the Medical Council might be composed of men who were also members of the Medical Boards. This was a matter for consideration, because in case of an appeal from the Board to the Council, it would really be an appeal from the Board to the Board. Without entering on such questions, he asked to be allowed to bring before them the proposed constitution of the Scotch Medical Board. The universities were to have eight representatives, the corporations only three, or one each. He thought it would be very evident that with all these powers, the supervision of medical education and the regulation of examinations and appointment of examiners, the complete control of education and licensing authorities in Scotland might be handed over to the universities altogether. The number of representatives allotted to the corporations was out of all proportion, more especially when compared with the numbers granted to the English and Irish bodies. Why this should be seemed very mysterious. It could not be on the ground of numbers licensed, because the corporations licensed a much greater number than the universities; it could not be on the ground of rejections, because the rejections at the corporations were more numerous than those at the universities; and it could not be on the ground of priority of existence, because the corporations were as old as, or older, than the medical faculties within the universities. They had, in fact, instituted some of these faculties. The corporations were the oldest medical educational licensing bodies in the kingdom, with, perhaps, a very few exceptions. A great deal had been said, on the other side of the Border, with reference to the low standard of the qualifications and the laxity of the examinations in Scotland. These reports were founded on the most flimsy evidence of a very worthless nature, and were evidently due to jealousy at the success that had attended the double qualification examinations. It would be a very hard case indeed, if on such reports, circulated by two or three jealous Englishmen, the fate of the Scottish corporations should be decided.

Mr F. B. IMLACH seconded the motion.

Dr BRAKENRIDGE thought that one of the points to which attention had been drawn was lost sight of in the resolution. The Board was to send two representatives to the Medical Council.



Bearing this in mind, it would be seen that if the universities had even a majority of one, it would allow of the representatives to the Council being elected entirely by the university party. These members would, of course, be referred to in cases of appeals coming from Scotland. It was most important that they should be able to feel that the Council was such that its decisions should be perfectly free from suspicion. He therefore moved the following rider to the motion:—"Further, that, by equality of representation or otherwise, provision should be made to ensure that one of the two members of the Medical Council elected by the Medical Board for Scotland shall be a representative of the corporations."

Dr ANGUS MACDONALD seconded.

Dr ARCHIBALD DICKSON asked if it was to be understood that all present were committed by the resolution as approving generally of the principle of the Bill? For himself, he protested against the Bill as being altogether uncalled for.

Dr ARGYLL ROBERTSON said he agreed with Dr Dickson. He did not think fresh legislation was required. He did not agree with the general principles of the Bill, but if the Bill was to be carried, the alterations suggested should be made.

Dr CHARLES BELL thought the Bill was an utter piece of folly, uncalled for, and unnecessary. Had the circumstances which now existed here been the same on the other side of the Tweed, they never should have heard of the Bill.

Dr T. A. G. BALFOUR suggested that those gentlemen who were evidently at one with them regarding the motions should enter a protest against the whole Bill, in which they should state the grounds of their opinion.

Dr ARGYLL ROBERTSON thought it would be better to strike out the words "while approving generally of the principles of the Medical Act Amendment Bill." There was no necessity for saying anything about it.

Mr JOSEPH BELL said it much depended on whether they were going to petition. They must now put it in as a matter of form, the Bill having passed the first reading, else their views would not be considered. They must now confine themselves to the provisions, and state that they approved generally of the principle of the Bill, while they could object to every single clause if they wished.

Dr CRAIG rather understood that they might petition against a Bill so long as it had not passed the second reading.

Dr DICKSON asked how they could say they approved of the principles of the Bill when they did not approve of them?

The CHAIRMAN said it was a matter of form and courtesy.

Dr DICKSON.—But it may not be a matter of truth.

Dr HALDANE said, if they petitioned against the Bill itself they would have no *locus standi* when it came to be considered in committee.

Dr IRELAND said he did not mean to make a motion, but he



thought they should state clearly the number of representatives they wanted. He considered that there should be equality of representation. It was perfectly monstrous that the Bill as it at present stood should give the universities control not only of their own classes, but control also of those of rival bodies. He had had dealings with men in high places, and knew how they were sometimes apt to behave in such circumstances. They might increase the number of corporation representatives by one, and say they had done what was asked of them.

After some further conversation, Dr Smith agreed to substitute the word "objects" for "principles," and to accept the rider of Dr Brakenridge, with the deletion of the words "by equality of representation or otherwise."

The resolution was then adopted unanimously.

Dr D. R. HALDANE moved,—“That all candidates for the final examination of the Medical Board in Scotland be required to pay a uniform fee.” In the new Medical Bill, he said, there were the following clauses providing for the fees to be paid for admission to the final examinations:—

“Each Medical Board fund shall be applicable to the payment of the expenses following, in the order of priority in which they are named—that is to say:—

“1. The expenses of examinations within the part of the United Kingdom to which such Board belongs.

“2. The reasonable expenses incurred by members of the Medical Board in attendance on such Board, and the payment of a reasonable remuneration or compensation for attendance to such members.

“3. Any expenses in respect of officers and rooms, and any expenses in respect of elections, visitations, or otherwise, which the Board may properly incur in the performance of their duties under this Act, and subject to the payment of the foregoing expenses, in this Act described as the administrative expenses of each Board.”

These three clauses referred to what were called administrative expenses. Then there was another class of expenses which were placed on a different footing.

“4. The expenses of maintaining any such medical museums and medical libraries belonging to any medical authority for the time being authorized to return a member to the Medical Board, as may before the passing of this Act have been ordinarily maintained for general public purposes by such authority in their capacity of granters of qualifications for registration under the Medical Act, 1858, and have been so maintained out of fees paid by applicants for such qualifications, and may be of such importance to the promotion of knowledge in medicine or surgery as to deserve to be maintained out of the funds of the Medical Board.”

Then the Bill went on to explain how the funds were to be raised.

“For the purpose of supplying moneys to form each medical fund,

each Medical Board may charge such fees for its examinations, and for the registration of medical students within its part of the United Kingdom, as that Board, with the assent of the Medical Council and sanction of the Privy Council, may determine."

Further, it provided that, "In estimating the amount of the fees to be charged by each Medical Board for its final examination, a distinction shall be made between so much of the fee as is leviable for the purpose of supplying funds for defraying the administrative expenses of the Board, and so much as is leviable for the purpose of defraying the expenses of the maintenance of museums and libraries;"—and here comes the important point—"and the fees to be paid by university graduates or undergraduates holding university certificates of having passed the examinations at their university, qualifying for admission to the final examination of the Board, shall not exceed the portion of the fee leviable as aforesaid for the purpose of supplying funds for the administrative expenses of the Board."

Any one who read this last clause would have read it in this light, that university candidates would have to pay only the administrative expenses; whereas candidates from the corporations would have to pay the whole sum leviable. Very properly Dr Stevenson Macadam laid this before the Town Council as being unfair to the corporations. Professor Struthers of Aberdeen replied to Dr Macadam's statements in a letter to the *Scotsman*, in which he gave a very important explanation. It was upon his representations that the clause was introduced into the Bill. It was intended to charge an extra fee only from candidates coming from corporations which availed themselves of the funds of the Medical Board to support their libraries and museums. In other words, if the corporations did not avail themselves of those funds, their candidates would be on the same footing as the university candidates. It was very satisfactory to know that such should have been the intention of the framers of this clause. Professor Struthers said that "if the Scottish corporations should desire it, the Scottish universities could have no ground of objection to an amendment that the museum and library provision, and with it the distinction of fee, shall not apply to Scotland." He therefore thought there would be no difficulty in having this carried. He might mention that Professor Struthers's letter was further very interesting as showing, what was an open secret before, that the universities had a good deal to do with, or were consulted about, the Bill before it was brought into Parliament (Hear, hear). The universities were important bodies, with great political power, and he had no doubt the Government thought, if they brought forward a bill which would be opposed by the universities, they would not be able to pass it, and so, to use a common expression, they "squared" the universities by giving them this large share of representation. Professor Struthers's letter showed this very clearly. He accepted



the full responsibility of the clause regarding the payment of fees by university students. It was a rather unfortunate thing, this clause to maintain museums and libraries. It was no doubt meant in aid of the College of Surgeons in London, which required a large sum to keep up the museum founded by John Hunter. Here he quite expected there would be a difficulty in the working of the Act. It was to be presumed that different Boards would charge, as far as possible, the same fees; but it was evidently the wish of the universities that their candidates should pay only the fee to cover administrative expenses, whereas the London College of Surgeons' candidates would have to pay a much larger fee to provide for the keeping up of the museum and library. It was very probable that an attempt would be made to screw up the fees in Scotland to equal those in London, but the universities would go along with them in their opinion that no fee should be higher than was required to pay administrative expenses.

Dr KEILLER seconded the motion, which was agreed to unanimously.

Mr JOHN DUNCAN moved,—“That provision be made that at the final examination of the Medical Board no student shall be examined by his own teacher.” There could be little doubt, he said, that the Bill was an emanation from London, although it might have impressed on it a few of the university peculiarities. It might have important and praiseworthy objects in view, but it had also another object in view by no means so praiseworthy—the damaging of Scotch medical education. The Bill had this in common with its predecessors. The conduct of some of the leading medical journals in suppressing the views of the Scottish profession, in declaiming against the Scottish schools, and in defaming the corporations, abundantly proved that their object was to injure medical education in Scotland. An observation in the *Lancet* went so far as to hope that the universities and corporations in Scotland might, like the Kilkenny cats, by their fightings put an end to each other. In this Bill the London people seemed to have a greater hope of success. It became their duty to protect themselves against the monopoly proposed to be conferred upon the university. It was necessary that the extra-mural schools should be so protected. His resolution was fair, just, and practicable. It was essential to the existence of their schools, and it would be advantageous to show that it ought to be introduced into the Bill, and not left for after consideration. He thought it would not be difficult to show that anything which went to make the final examination an unbiassed one was fair and just. The principle was already conceded in those examinations, with which they did not propose to interfere, within the university in which coadjutors from the outside were appointed to act along with the professors. They proposed that in all final examinations the absence of bias and prejudice should be seen. At no very distant date in university examinations a schedule was wont to be placed beside each



examiner to say where the student had been educated, presumably that the university examiner should be able to deal with any student who had been so benighted as to put himself under another teacher. The resolution was thoroughly practicable, and it was easy to show that it was essential to the existence of the extra-mural school. He supposed it would be taken for granted that students would have a preference for the lectures of those who would examine them, and he supposed it might also be taken for granted under the Bill as it stood that the universities would be the examiners. There could be no more honourable body of men than the present professorial staffs, but there were black sheep in every body, and legislation was for the future as well as the present. The extra-mural classes were dependent for students on two sources—the universities and the corporations. When a professor was very able or was prone to examine on some of the eccentricities which sometimes characterized men of genius, they had few students or none from the universities, but they were able to go on because the corporation students came to them. Under the Bill, when professors examined all the students, the extra-mural classes would cease to attract any, and, therefore, to exist. It was very important that this provision should be introduced into the Bill, and not left for after consideration. They could hardly expect that a Board made up greatly of university men would agree to it, and an appeal to the Council would be of little avail. The English members of the Council would not understand it, and the appeal would be simply from Board to Board.

Dr ARCHIBALD, St Andrews, seconded.

Dr ARCHIBALD DICKSON could not agree with Dr Duncan. He said his resolution was necessary in the interests of fairness. To make the thing fair, it should be that the student should not be examined exclusively by his own teacher, or else that he should not be examined by any of the teachers in his own place of study.

Mr BELL thought Dr Dickson was logically correct. It was all very well to say that no teacher should examine his own, but might not a black sheep be unfair to his rival's students?

Dr DICKSON then moved the insertion of the word "exclusively" after the word "examined" in Dr Duncan's resolution.

This was seconded, but, on being put to the meeting, was lost by a large majority.

The original resolution was then carried unanimously.

A vote of thanks to the Chairman terminated the proceedings.

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IN a leading article on the controversy regarding the proposed constitution of the Medical Board of Scotland, the *Glasgow Herald* of May 24th makes the following instructive reply to the contentions of some of the university party that the teaching in the Edinburgh extra-mural school is not what it should be:—"The 'other side' charges the extra-mural school with inefficient teaching, and makes assertion that the small attendance at extra-mural

classes is due to the inadequacy of the instruction given by the lecturers. But this is a too startling account of men from whose ranks university vacancies are filled, and many of whom rank equally with, and some far ahead of, the professors themselves in point of distinction as teachers and investigators. There is, however, one instance which may be cited as a complete reply to the charge that inefficient teaching is the cause of the small attendance at extra-mural classes. An assistant-professor, having for a lengthened period to conduct a university class in the absence of the professor, obtained commendation on all sides for the excellence of his work. His benches were crowded with eager students, and his teaching was esteemed far and wide. Shortly thereafter a new professor, 'who knew not Joseph,' was appointed in place of the former occupant of the chair, whereupon the assistant left the university walls to assume the functions of an extra-mural lecturer. To the extra-mural school this gentleman carried all his apparatus, teaching power, and celebrity. Yet, strangely enough, the teaching which crowded the university benches and drew encomiums from all quarters was utterly unable to attract students to the extra-mural school. The explanation of this anomaly—for explanation it must possess—is readily forthcoming. The new occupant of the chair possessed different views of things from the former assistant. Furthermore, the new professor was examiner in his subject; and however able the teaching and distinguished the reputation of the assistant located in the extra-mural school might be, his efforts to obtain a class were unavailing in the face of the fact that what he taught in the university yesterday with acceptance and credit was of no avail for the Edinburgh medical student to-day. This case presents, to our mind, a perfect reply to the statement that it is inefficient teaching in the extra-mural school which propels students into the university of Edinburgh. If a tithe of what is boldly stated to-day in the public prints be correct,—and as yet no adequate refutation of these statements has appeared,—then we must hold the opinion that, if free and open trade in teaching is a desirable thing, great and lasting modifications must be wrought in the largest medical school in Scotland. If, on the other hand, there is to be a tacit monopoly of teaching by the Scottish universities, the Government cannot do better (or worse) than allow things to remain as they are."

THE shock which was felt on the premature publication in the *Times* of certain paragraphs from the evidence of Lord Wolseley before the committee appointed to inquire into army medical organization has been greatly diminished by the issue of the report of that committee. Wherever facts and not opinions are given, it tells entirely in favour of the medical officers. The false and altogether unwarrantable statements of a few irresponsible newspaper correspondents, that the wounded were neglected, that sick men were dosed, irrespective of their various ailments, out of the



same pill-box, and that amputations were performed without chloroform, are now shown to be as utterly groundless as those of their German colleague who advised his journal in the Fatherland of the ruthless and cold-blooded massacres perpetrated by the perfidious Englishmen. But the strongest testimony in favour of the Medical Department is to be found in paragraphs 146 and 147 of the report, where the committee say, "We would direct attention to the statistics furnished to us by Surgeon-General Hanbury, which give the results of the treatment of sick and wounded in all the hospitals in Egypt from the 17th of July, when the first battalions landed at Alexandria, to the 9th of October, the date upon which the force ceased to be an army in the field. During that period the average strength of the force (including the Europeans of the Indian contingent, but not the Royal Marines) is shown to have been 13,013 non-commissioned officers and men; the number of admissions to hospitals was 7590 (viz., 378 wounded in action, 7212 suffering from disease or injuries); the number of deaths returned is 172; 74 died of disease, 5 from accident, and of the remaining 93, 82 were killed in action, and 11 died of their wounds subsequently. The admission rate per 1000 was 582·3, and the death-rate 13·21. The number of men invalided to Malta or England was 2321. Thus up to the 9th of October less than 3 per cent. of the wounded men admitted to hospital died; of the remaining 7212 admitted to hospital, 74 died of disease. There remained under treatment in the hospitals in Egypt on the above date 1444. The figures give a death-rate for the whole force of 24·39 per 1000 per annum. Of the officers 10 were killed in action; 52 were wounded or injured, of whom 2 died. These figures speak for themselves of the skill and care with which the medical officers must have performed their professional duties in Egypt. Much credit is also due to the medical officers for the absence of pyæmia and other diseases incidental to hospitals in war." In the face of these figures, we are surprised to find the committee saying in the next paragraph (148) that "the nursing, feeding, and hospital administration generally left much to be desired, more especially at Ismailia and Cairo." There is little wonder that Sir William MacCormac dissents emphatically from this paragraph. The appendix in which he expresses his views is a complete defence of the Medical Department. The charges of Lord Wolseley and others are fully answered. The evidence of the general is contrasted with that of Sir John Adye, the chief of the staff, who speaks highly of the efficiency of the arrangements made by the medical officers for the care of the wounded. It is further contradicted by that of the surgeon-general and other officers of the Medical Department. And we may add that its general untrustworthiness is even more glaringly shown by its utter variance with Lord Wolseley's own despatch, dated Cairo, 24th September 1882, in which he says, "The Medical Department under Surgeon-General Hanbury, C.B., have done everything that could possibly be done



for the care and comfort of the sick and wounded." It cannot but be regretted that Lord Wolseley should have sullied the fair fame won in Ashantee and Egypt by wild, reckless, and contradictory statements. We can only regard them as evidence of that eccentricity which is a not uncommon characteristic of men of genius, and is probably intended to show us that in some directions and on some occasions their intelligence may be below that of the ordinary average mortal.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine on 6th June 1883, and were admitted L.R.C.P. Edin.:—Henry Thos. Rudge, Bristol; Tom Henry Trevettian Frampton, London; Arthur de Renderville, London; Francis Jefferies Spranger, London; John Price Brown, Galt, Ontario, Canada; George William Ford, London; John Joseph Stack, London; Gordon Griffiths Jones, Glasgow; Charles Augustus Kelly, London; Edward Charles Maynard, Richmond Hill, Surrey; Henry William Payne Makeham, London.

UNIVERSITY OF EDINBURGH.—THE CHARLES MURCHISON SCHOLARSHIP IN CLINICAL MEDICINE.—The second examination for this scholarship was held in Edinburgh on the 17th and 18th of April, the first examination having been held in London last year. Twelve candidates entered their names for the competition, and the examination was conducted by Dr George Balfour, President of the Royal College of Physicians, Edinburgh, and Professors MacLagan and Greenfield. The scholarship was gained by George Cecil Dickson, M.B., C.M. Edinburgh. The next in order of merit was John Bland Sutton, M.R.C.S. England and L.R.C.P. London, and several of the candidates displayed much merit.

THE WORSHIPFUL COMPANY OF GROCERS, LONDON.—ORIGINAL RESEARCH IN SANITARY SCIENCE. *First Quadrennial Discovery-Prize of £1000, 1883-1886.*—Subject to the conditions of the Company's scheme, the Court now announces, as the matter of competition for this prize, the following problem:—"To discover a method by which the Vaccine Contagium may be cultivated apart from the animal body, in some medium or media not otherwise zymotic:—the method to be such that the Contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can within the time be tested) prove itself of identical potency with standard Vaccine Lymph." The prize is open to universal competition, British and foreign. Competitors for the prize must submit their respective treatises on or before the 31st of December 1886; and the award will be made as soon afterwards as the circumstances of the competition shall permit, not later than the month of May 1887. In relation to the Discovery-Prize, as in relation to other parts of the Company's scheme in aid

of sanitary science, the Court acts with the advice of a scientific committee, which at present consists of the following members:— John Simon, C.B., F.R.S., John Tyndall, F.R.S., John Burdon Sanderson, M.D., F.R.S., and George Buchanan, M.D., F.R.S. All communications on the subject as to conditions, etc., are to be addressed to the Clerk of the Grocers' Company, Grocers' Hall, London, E.C.

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## OBITUARY.

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### THE RIGHT HON. SIR JOHN McNEILL, G.C.B.

WE have this month to record with much regret the death of the Right Hon. Sir John McNeill, G.C.B., who died at Cannes, on the 17th day of May, at the advanced age of 88. His health had been failing for several years, and it was necessary for him to spend the winter season in Cannes, his favourite health-resort. His mind, which was of extraordinary power, retained its vigour to the end, as may be seen from his preface to the last edition of *The Crimean Commission and the Chelsea Board*, published over a year ago.

Sir John was third son of Mr John McNeill of Colonsay, and younger brother of the late Lord Colonsay, one of the Lords of Appeal. He was educated for the medical profession at St Andrews and Edinburgh Universities, and took the degree of M.D. in 1814. In 1816 he entered the medical department of the Hon. East India Company as assistant surgeon, and in 1824 he was promoted to the rank of surgeon. While in India he displayed a peculiar talent in acquiring a knowledge of the languages, customs, and habits of the native tribes, which proved of much service in communicating with the chiefs. He once distinguished himself by leading our troops, sword in hand, to victory. His next appointment was that of surgeon to the envoy at the Court of Persia, and in 1836 he retired from the medical service on being appointed Envoy and Minister Plenipotentiary in succession to Sir J. Campbell. He continued to act at the Persian Court from 1836 to 1842, when he returned to Scotland. His valuable services in this place were recognised by the Government conferring upon him the honourable title of Knight of the Grand Cross of the Bath.

After the passing of the Poor Law (Scotland) Act, 1845, Sir John was appointed Chairman of the newly created Board of Supervision, an office which he filled most efficiently for twenty-three years. It was while he held this office, in 1851, that he instituted an inquiry into the condition of the poor in the Western Highlands and Islands. Sir John made the inquiry in person, and, being conversant with the Gaelic language, was better able to sift the true from the false than most gentlemen likely to hold his position. The able report which he issued at the time must be invaluable to the Royal Commission at present sitting in the West.

His intellectual vigour, his fairness and moderation, his love of truth, and his wonderful power of grasping the details of adminis-



tration, led the Government, in 1855, to appoint him as commissioner to proceed to the Crimea with Colonel Tulloch to inquire into the whole arrangement and management of the commissariat department, and also into the alleged delay in unshipping and distributing the clothing and other stores supplied for the use of the troops. Six months after they returned, the House of Commons, representing the will of the nation, unanimously voted an address to the Queen, praying Her Majesty to confer some mark of distinction upon the commissioners in recognition of their services, and Her Majesty was graciously pleased to name Sir John a Privy Councillor, and Colonel Tulloch a K.C.B. He also received the thanks of the Government, and £1000 was offered for his services. This, however, he refused to accept.

Sir John was President of the Edinburgh Literary Institute for a number of years, and Deputy Lieutenant of the City and County of the City of Edinburgh. He was an honorary D.C.L. of Oxford, a LL.D. of Edinburgh, and a F.R.S.E.

As an author he is known by his work on the *Progress and Position of Russia in the East to 1854*; his *Report on the Condition of the Poor in the Western Highlands*, 1851; the *Report of the Crimean Commissioners in 1855*; and the new edition of Colonel Tulloch's *Review of the Crimean Commission and the Chelsea Board*, already referred to.

Although Sir John retired from the medical profession in 1836, he always took interest in all that belonged to it. On the other hand, his professional education must have been of great service to him, whether attending to the Persian nobles or giving advice to the poor people of his native isle, whether estimating the amount of nourishment and clothing necessary for health for a pauper living peaceably in the Western Highlands or for a soldier roughing it in the Crimea.

Sir John was thrice married, and is survived by Lady Emma Augusta, daughter of the 7th Duke of Argyll.

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MR BENJAMIN BELL, F.R.C.S. ED.

FOR many years past the name of Benjamin Bell of Edinburgh has been familiar as a household word, and it was only natural that the news of his death on the 13th of June should elicit, as it did, general and sincere regret. It need scarcely be said that many, both in the profession and out of it, will greatly miss him; but in a marked degree will the readers of this Journal do so, who have often been instructed and charmed by his contributions to these pages, although they knew not on all occasions to whose scholarly and genial pen they were indebted for the profit and pleasure they received. It is most fitting, therefore, that here, of all places, a tribute, however slight and inadequate it may be, should now be paid to his memory.

Mr Bell, a descendant of an old Dumfriesshire family, whose



lands lay in the parish of Middlebie, was born at Edinburgh on 13th April 1810. His grandfather—whose portrait by Beugo, after the fine painting by Sir Henry Raeburn, is treasured by collectors—was the celebrated Mr Benjamin Bell, author of *The System of Surgery*, etc., and his father, Mr Joseph Bell, also attained considerable eminence as a surgeon. Animated by the example of such distinguished ancestry, the subject of our sketch chose the medical profession as the sphere of his life's labours. His education was thorough and varied. After having received all the instruction that Edinburgh could then furnish, he went to London, and there was a favoured pupil and friend of such men as Lawrence, Stanley, Travers, and Baly, who produced an influence on him that was distinctly traceable through his whole life and action. His mind at that early period was singularly mature and well-balanced, digesting thoroughly all he acquired,—of clear-sighted candour and receptiveness, rejecting nothing and admitting nothing till he had, with careful and deliberative consideration, examined the subject in all its bearings. At that time, too, he had to make up his mind on matters connected with religious, moral, and social life, and did so with such firmness and decisiveness that the conclusions he then came to operated throughout his whole subsequent career, only deepening and mellowing as years went on, but never wavering in essentials, and never yielding to pressure, from whatever side it might come, always presenting himself as an upright, consistent, righteous, and devoted man, true to himself, and equally true to others and to the cause he for the time advocated and supported,—

“Justum et tenacem propositi virum.”

In 1832 Mr Bell became a Licentiate of the Royal College of Surgeons, Edinburgh, and in the following year a Member of the Royal College of Surgeons, England. In 1835 he was elected a Fellow of the Edinburgh College, and ultimately, in 1864, was chosen its President. All along he took an active interest in the work of that corporation, frequently acting as examiner. In 1864, also, he was appointed one of the non-professorial examiners for degrees in medicine in the University of Edinburgh. As a member, he was associated with the Royal Medical and Medico-Chirurgical Societies of Edinburgh, and was President of the latter body in 1859. Very early in his career he acquired an extensive practice as a physician, but his predilections naturally impelled him to the surgical branch of his profession, and to diseases of the eye he thenceforth gave special attention. In 1834, in conjunction with Mr Robert Hamilton, he established the Eye Infirmary of Edinburgh, which for many years owed everything to his care. His professional activity, even in advanced life, was far from being circumscribed, and various other institutions were favoured with his much appreciated services. Among these may be mentioned the Royal Dispensary and the Royal Blind Asylum; and in connexion with the latter it is gratifying to record that, on 14th December 1869, the male

and female workers presented him with a very handsome gold watch, "as a small token," it was said, "of their loving gratitude for his great kindness and attention to them for the long period of thirty years, during which he had acted as their medical attendant, at no little personal inconvenience, and for a merely nominal honorarium." And at his funeral in the beautiful cemetery of the Dean, it was most touching to observe some blind men placing a wreath of flowers upon their benefactor's grave.

The Edinburgh Medical Missionary Society also owed much to Mr Bell's enthusiasm and fostering care. Although, strictly speaking, he was not one of the little company who founded the Society in 1841, of whom Dr Abercrombie was the moving spirit and the Rev. G. D. Cullen is now the only survivor, the claims of Medical Missions had from the first his warmest sympathy. In 1843 he became Joint Secretary of the Society with the late Dr Coldstream, and after the death of Dr Coldstream in 1863 he performed the duties of the office single-handed. Mr Bell was thus virtually identified with the Edinburgh Medical Missionary Society from its commencement, and to him it is indebted, in no small degree, for the prosperity which it now enjoys. So keen was his interest in its work, that he was rarely, if ever, absent from any meeting of the directors, and it is said the chill which induced the lung and heart disorder of which he died was caught at the last meeting he attended.

Our friend was, in the best and largest sense of the word, an accomplished physician, combining the practical and theoretical teachings of the older men with the minute and microscopic research of the more recent, harmonizing them as far as they admitted of harmony; receiving, though not, of course, always accepting, whatever had the promise of progress in science, and applying what he accepted to practical use in the treatment of disease. Above all, he was safe. His patients could and did rely on him as implicitly as his friends did in other relations in life. And he was what all truly good and great men are, single-eyed and simple,—

*"Multis ille bonis flebilis occidit."*

Mr Bell's contributions to medical literature were numerous and varied.<sup>1</sup> Most of them have appeared in our own Journal, to

<sup>1</sup> The following list embraces some of Mr Bell's acknowledged communications to this Journal:—

"Remarks on Dilution as a Principle of Therapeutics"—January 1856. "Remarks on the Physiological Action of Atropine in Dilating the Pupil"—December 1856. "Case in which a Tumour of the Pia Mater caused Compression of the Spinal Cord"—October 1857. "The Therapeutic Relations of Opium and Belladonna to each other"—July 1858. "Case in which Inflammatory Softening existed in a Limited Portion of the Spinal Marrow"—Nov. 1858. "Case of Perforation of the Stomach occurring under Unusual Circumstances"—March 1861. "Harveian Discourse, 1867"—June 1867. "Case of Extravasation of Blood into the Pericardium"—April 1863. "Account of Three Cases of Congenital Cataract in one Family cured by Operation"—June 1868. "A Brief Review and Estimate of the Professional Writings of Benjamin Bell"



which he has for years rendered constant and valuable service, not only as an author of original papers, but also, and that very extensively, as an anonymous reviewer of other men's writings, and the genial, appreciative sketcher of many a professional worthy now passed to his rest. In this connexion it may interest our readers to know that to him they owe that lengthy and searching criticism of Professor Calderwood's work on the *Relations of Mind and Brain* which appeared in the April and May numbers of the Journal of the present year, and which is characterized by rare intellectual ability and careful observation. To him also they are indebted for those charming Addresses to Medical Students contained in our October number year after year, and which sparkle with wisdom, "like apples of gold in pictures of silver." In general literature Mr Bell's most ambitious efforts are the *Life, Character, and Writings of Benjamin Bell*, his grandfather; a *Memoir of Robert Paul, Esq.*, a life-long friend; and the Memorials of his kinsman, the late Lieutenant John Irving, R.N., one of the heroes of the Franklin Expedition.

Mr Bell was a prominent member of the Free Church of Scotland, and for a long series of years was one of the best-known figures in its annual General Assembly, ever ready to take an active share in its varied business and discussions. Along with his relative, the Right Hon. Lord Moncreiff, and the late Lord Ardmillan, he was, in 1841, ordained to the eldership in the parish church of St George's, Edinburgh. When the Disruption came, he cast in his lot with his pastor, Dr Candlish, and left the Established Church. At the time of his death he was what is termed the "father" of Free St George's Kirk-Session; and from the noble and loving tribute paid to his memory, on the day after the funeral, by Dr Whyte, the present minister of the congregation, we take the liberty of making the following extract:—"Over and over again the apostle says that a bishop must be blameless—blameless as a steward of God. And Mr Bell's fulfilment of his forty-two years of office was conspicuously a bishopric without blame. Prominent as, on account of his character and abilities, he was compelled to be in our ecclesiastical and congregational affairs, and involved, as he could not fail sometimes to find himself, in anxious and trying matters, yet by universal consent he came through them all both with unimpaired integrity and with an unruffled temper. Decision of mind and warmth of feeling were not wanting in our friend, as we all quite well remember; but he was possessed of that thrice happy balance of mind and purity of heart which carried him even through keen controversy, hurting no one, and himself unhurt.

(his Grandfather).—November 1868. "A Peculiar Paralytic Condition of the Lower Extremities following Gastric Fever"—May 1870. "Chronic Endo-carditis, independent of Rheumatism and Amenable to Treatment"—July 1877. "Note on some of the Therapeutic Virtues of the Eucalyptus Globulus"—February 1878. "Animal Vaccination"—May 1880. "Eucalyptus Globulus in Typhoid Fever"—August 1881.



His modesty, which too often passed over into too great diffidence, kept Mr Bell from taking the place in public life, and even in literature, which his cultivated abilities fitted him to take. His speeches in times of controversy were always models of perspicuity, calm-mindedness, and high tone; and his pen, when he could be prevailed on to use it, exhibited the same, and even higher qualities."

Mr Bell had the misfortune, more than a year ago, to lose his wife, a daughter of Laurence Craigie, Esq., of Glendoick. Although to outward appearance he seemed to have recovered his usual equanimity, the loss undoubtedly impaired his health, and rendered him less capable than he would otherwise have been to battle with the effects of the chill already referred to. What he said concerning his departed friend Dr John Brown may with equal truthfulness now be said of himself:—"It is sad to think that his well-known figure, and calm, meditative gait, his intellectual and benignant countenance, shall no longer meet our eye on the streets of Edinburgh. *Abiit ad plures*. He has gone over to the majority. While earth is poorer, heaven is all the richer; for we may safely say, if ever a member of our noble profession manifested the Master's spirit in his daily life, it was the good and gentle brother whom we now deplore."

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#### DR HERVEY B. WILBUR.

Dr HERVEY B. WILBUR, the Medical Superintendent of the New York State Asylum for Idiots at Syracuse, died there very suddenly of heart disease on the 8th of May last. Across the Atlantic his death is received as a public loss, and it will be regretted by all who knew him in this country. He was born in 1820 at Wendell, Massachusetts, and studied at Amherst College. At first he engaged in teaching, and then studied civil engineering, but finally he devoted himself to medicine. He was for six months assistant in a lunatic asylum, and for a short time engaged in medical practice in his native State. These various pursuits combined to fit Dr Wilbur for the main business of his life, the establishment of training schools and asylums for idiots in the New World. Guided by the writings of Dr Edward Seguin, he began, in 1848, a private training school at Barre, Mass. In 1851 he accepted the post of medical superintendent to the experimental school at Albany, which was carried on for three years under the eyes of the State Legislature there, after which it was transferred to Syracuse.

It was no doubt in great part through the success of his labours, the force of his personal character, and the circulation of his writings, that asylums for idiots were established, one after another, in the principal States of the Union. Supported by sufficient funds from the public purse, wisely managed, and well equipped from the outset, the education of idiots took a vigorous growth in

the New World, and reached a perfection which could hardly be believed by those who have only seen it languishing under the shadow of a voting charity.

Dr Wilbur did not devote much of his attention to pathology, which, nevertheless, he did not disdain; but his attention to hygiene was incessant and judicious, and his skill as an educator was very great. He had a subtle aptitude for applying physiological principles to the art of evolving and cultivating the torpid faculties of his pupils. Perhaps no one, not even Seguin himself, was more successful in calling out the mental powers of the imbecile through motor exercises. His patient skill in the difficult duties of his chosen task could only be appreciated by the few, but his intelligence, good management, and devotion to his work gained him the goodwill of the many. It was mainly through his influence with the New York Legislature that the Newark Asylum for Adult Imbecile Women was established in 1879. The general superintendence of this much-needed institution was entrusted to his care.

Dr Wilbur frequently visited this country, and had a deep sentiment of love for the old home of his fathers. It was easy to discern in his character the traits of his Puritan ancestors, refined by a ripe culture. In the ceremonial points of social intercourse Dr Wilbur was stately and courteous to the verge of stiffness, but withal kindly, generous, and sympathetic, and of very agreeable conversation. In his youth he was an ardent abolitionist, and was one of those who engaged in assisting the escaped slaves from house to house along the Catskill Mountains till they reached the Canadian frontier.

A few years ago he became a member, and at last the President, of the National Association for the Protection of the Insane in the United States. The main object of this Society was to diminish the amount of restraint prevalent in the treatment of the insane in most of the asylums of the States. To study the question, about eight years ago Dr Wilbur came to Europe and visited many of the asylums in Great Britain. Several of his pamphlets on the subject have been reviewed in this journal.

His adversaries found him a formidable controversialist, keen, persistent, and unsparing in the attack of abuses, or what he deemed to be such, but always observing the rules of courteous warfare. His nature was of the stirring, uncompromising, militant cast. Gifted with elegant and refined tastes, and fond of literary pleasures, he might have lived at his ease, for he was blessed with worldly wealth; but he preferred the labour of organization, reform, and controversy. A man of this stamp must have made enemies; but as none were able to bring any pretext of an accusation against him they paid a tacit compliment to his capacity. He spent the best part of his life in the wearisome task of labouring for a helpless and neglected class. He was always ready to give a meed of praise to the worthy, to pity and to help the unfortunate, and to bear a part in the unceasing battle of the right against the wrong.





# PLATE I.

FIG. 1.—Shows a transverse section of a six-months foetal pelvis, from pubis to anterior vaginal wall.

*a*, Pubis. *b*, pelvic fascia. *c*, lies opposite urethra. *d*, opposite the unstriped longitudinal muscular fibre. *e*, opposite the vaginal papillæ of the mucous membrane. The complete blending of the anterior vaginal wall and urethra can be seen.

*PLATE I.*

**Fig 1.**

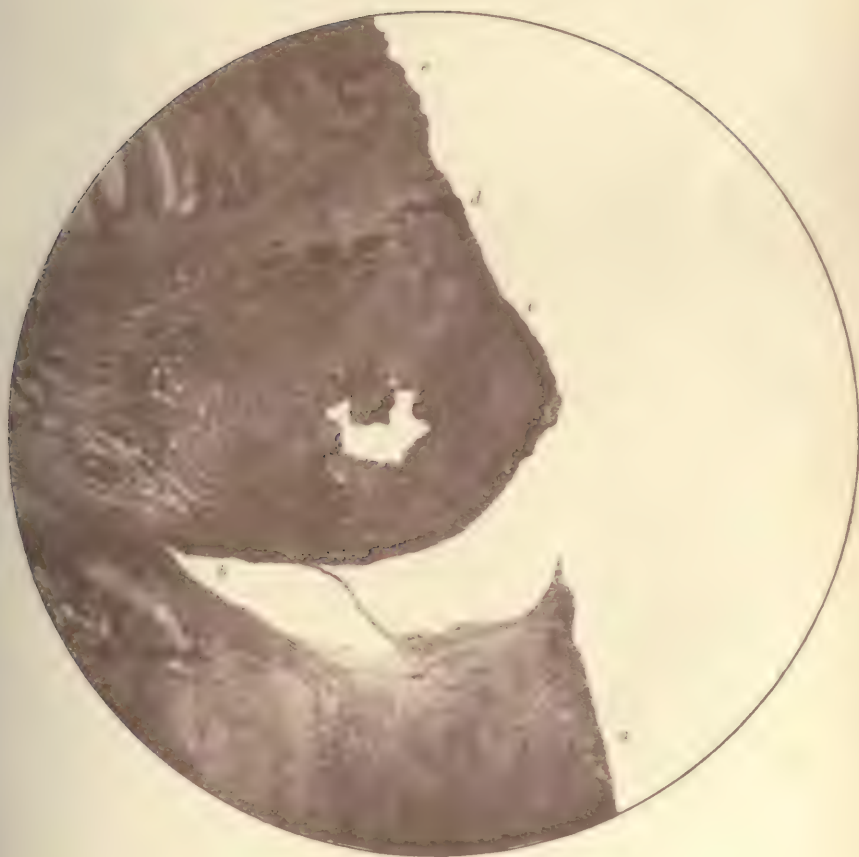








PLATE I.

Fig. 2.

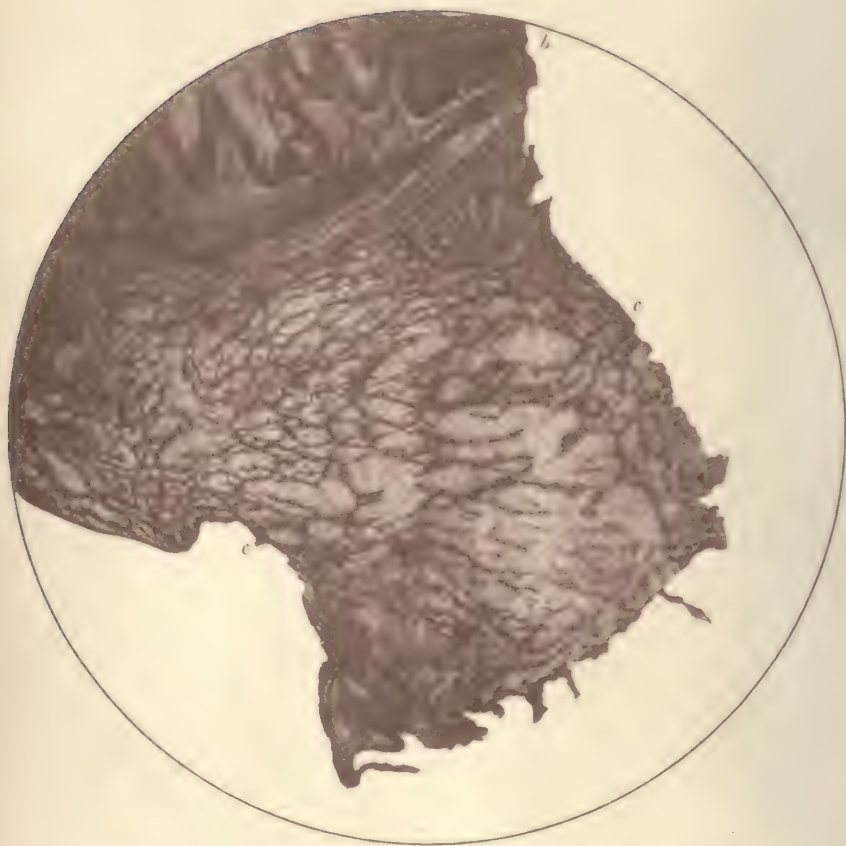


PLATE I.

FIG. 2.—Shows posterior vaginal wall and loose areolar tissue separating it from anterior rectal wall (latter not shown).

*b*, Posterior vaginal wall.    *c, c*, Loose areolar tissue, so-called recto-vaginal fascia.







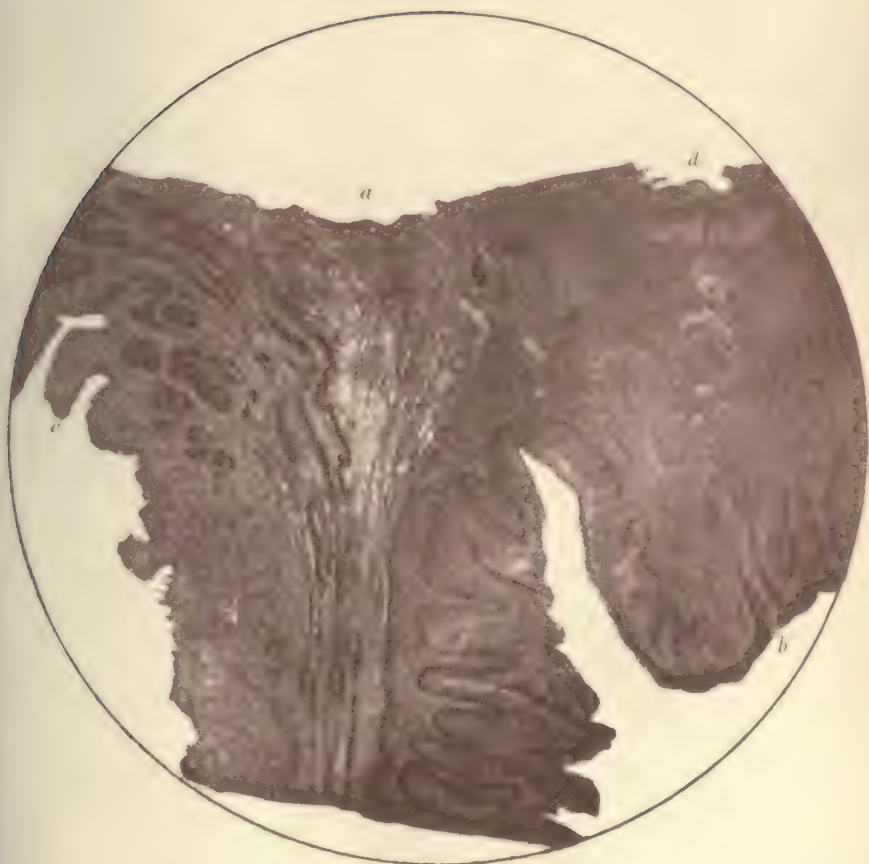
PLATE II.

FIG. 1.—Longitudinal section of cervix uteri, anterior vaginal wall and posterior bladder wall of six-months foetus. *d* is cervical canal. *a* lies above loose areolar tissue between bladder wall and cervix uteri. The circular and longitudinal vesical unstriped muscle is seen cut, and the urethral and anterior vaginal walls are seen closely united.



PLATE II.

**Fig 1.**









*PLATE II.*

**Fig. 2.**



PLATE II.

FIG. 2.—Transverse section of left half of foetal pelvis.

*c*, points to vaginal wall. *a*, is opposite ischiorectal fossa.  
*b*, opposite urethra.

These figures were obtained as follows:—Microphotographs were first obtained, and then, by a process recently acquired by Messrs W. & A. K. Johnston, a copperplate engraving is got, from which the figures were printed.

The microphotographs were taken with a Hartnack's microscope and 2-inch object-glass. The increase in size is therefore about 12 diameters, and is a comparatively slight microscopic one.





## Part First.

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### ORIGINAL COMMUNICATIONS.

#### I.—NUTRITION AND REPRODUCTION : CONSIDERED GENERALLY, AND AS BEARING ON THE ETIOLOGY AND TREATMENT OF DISEASE.

By ALEXANDER JAMES, M.D.

*(Read before the Medico-Chirurgical Society of Edinburgh, 4th July 1883.)*

“IN every part of the universe we observe means adjusted with the nicest artifice to the ends which they are intended to produce, and, in the mechanism of a plant or animal body, admire how everything is contrived for advancing the two great purposes of nature, the support of the individual and the propagation of the species.” So said Adam Smith, and so says every one who has snatched some time from the performance of these functions and devoted it to the consideration of their nature.

In the following paper I propose to try if we cannot get some idea as to how these functions of nutrition and reproduction are brought about. I shall consider only general principles, but I trust that we may from these be able to draw some deductions of practical interest.

Let us, in the first place, define what we mean by nutrition. This, in the higher animal, comprehends the complicated processes of digestion, absorption, assimilation, excretion, etc., not to speak of the still more complicated processes concerned in the seeking and securing of food. In the lower animals and in plants the process is much more simple. In the *amaiba*, for example, it means the envelopment of a small piece of organic matter by the protoplasm mass of that organism, and the gradual transformation, chemical and physical, of this minute piece of organic matter into the tissues of the *amaiba*. In the plant it means the taking in of certain chemical elements,—carbon, hydrogen, nitrogen, etc.,—and the building up of these into a tissue.

A question now meets us which requires some little attention. Are we to distinguish between the animal and the plant as regards the conditions which lead to their nutrition? Are we, remembering that whilst in the plant the processes are mainly synthetic,

and in the animal analytic, to suppose that the conditions which lead to their nutrition are not identical? Certainly not. We know, in the first place, that where the animal kingdom ends and where the vegetable begins there is no hard and fast line; we know that certain organisms, the *convoluta*, at one stage function like an animal, and at another like a vegetable; and we know that the process of building up, or synthesis, is not limited to the vegetable kingdom. As Foster says,<sup>1</sup> "Long ago, in opposition to the views of Dumas and his school, who taught that all construction of organic material, that all actual manufacture of protoplasm, or even of its organic constituents, was confined to vegetables and unknown in animals, Liebig showed that the butter present in the milk of a cow was much greater than could be accounted for by the scanty fat present in the grass or other fodder she consumed. He also argued, as an argument in the same direction, that the wax produced by bees is out of all proportion to the fat contained in their food, consisting, as this does, chiefly of sugar."

Finally, we know that during flowering in plants oxidative processes take place and carbonic acid is given off. We may therefore conclude that in animals and in plants synthetic and analytic processes are taking place, and that on the performance of those processes life depends.

But how, may we suppose, are these synthetic and analytic processes, how in plants or animals is the constant building up and breaking down of their tissues, which constitute life, brought about?

To get a general idea of this, let us look at the explanation given by Spencer as to how we may suppose a plant builds up its tissues. Speaking of the effect specially of the yellow rays on plants,<sup>2</sup> he says, "The atoms of several ponderable matters exist in combination, those that are combined having strong affinities, but having also affinities less strong for some of the surrounding atoms that are otherwise combined. The atoms, thus united, and thus mixed among others with which they are capable of uniting, are exposed to the undulations of a medium that is relatively so rare as to seem imponderable. Those undulations are of numerous kinds; they differ greatly in their lengths, or in the frequency with which they recur at any given point; and under the influence of undulations of a certain frequency some of these atoms are transferred from atoms for which they have a stronger affinity to atoms for which they have a weaker affinity. That is to say, particular orders of waves of a relatively imponderable matter remove particular atoms of ponderable matter from their attachments and carry them within reach of other attachments."

Probably this will be better understood from an example. The starch, sugar, albumen, etc., of plants is chemically composed of

<sup>1</sup> Foster's *Physiology*, fourth edition, p. 427.

<sup>2</sup> *Principles of Biology*, vol. i. p. 29.

carbon, hydrogen, nitrogen, and oxygen, etc., and is formed out of  $\text{CO}_2$ ,  $\text{H}_2\text{O}$ ,  $\text{NH}_3$ , etc. Now, the unions of carbon with oxygen to form carbonic acid, of hydrogen with oxygen to form water, of nitrogen with hydrogen to form ammonia, are stable ones; but we have to suppose that by the light undulations the molecules of carbon and oxygen in carbonic acid, of hydrogen and oxygen in water, and of nitrogen and hydrogen in ammonia, are made to vibrate at different rates, so that there occurs a separating of the carbon and oxygen of the carbonic acid, of the hydrogen and oxygen of the water, and of the nitrogen and hydrogen of the ammonia, and that the dissociated molecules of carbon, hydrogen, nitrogen, are made to unite to form an organic substance, a substance by the breaking down of which into  $\text{CO}_2$ ,  $\text{H}_2\text{O}$ , or  $\text{NH}_3$ , energy can be obtained.

So much by way of theory as to how the building up of tissue is brought about. We have now to consider the conditions which lead to a breaking down. We may here, I think, suppose that, seeing that the molecules of carbon, hydrogen, nitrogen, etc., are in a more stable condition, when combined to form  $\text{CO}_2$ ,  $\text{H}_2\text{O}$ ,  $\text{NH}_3$ , than when associated to form starch, albumen, etc., there will always be a tendency for them to assume their more stable condition. We get an example of this in the fact that plants give off  $\text{CO}_2$  in the dark; that is to say, when the force which causes a building up, the light, is withdrawn, the plant tends to break down. But it is most important to remember that a breaking down will occur if the same solar radiations are allowed to impinge on a plant, but in excess. For example, if we allow these solar radiations to fall on the leaf of a living plant well provided with water, etc., we promote a building up of tissue, or deoxidation; but if we concentrate on a leaf these same rays by means of a lens, we cause a breaking down, or oxidation. Why this should be we need not consider, but it is important for the purpose of our paper to remember that such is the case. So much for the occurrence of synthetic and analytic processes in plants; let us now say a little about them in the case of animals.

To do this we must first of all form some ideas as regards the action of the nervous system. On this subject Mr Herbert Spencer says, "The simplest nerve-centre puts in relation not afferent and efferent fibres alone, but, through other fibres, commissural and centripetal connexions are made between it and other nerve-centres of the same grade and of a higher grade. Further, when such a nerve-centre is excited through an afferent nerve, the disengaged molecular motion does not escape wholly along one or more efferent nerves, but that part of it propagated to higher centres there sets up supplementary changes. The diffusion does not stop here; remoter parts are reached, and thus the disturbance of a single nerve fibre, if at all considerable, reverberates throughout the entire nervous system and affects all the functions controlled by it. Digging a pin into the foot may cause a convulsive contraction, not of the leg muscles only, but of many other muscles



throughout the body. At the same time, it may alter the rate of pulsation and send waves of constriction along the arteries. The excreting structures of the skin may be so affected that a burst of perspiration results, and the actions going on throughout the alimentary canal may be changed. Such reverberations, which become conspicuous when the disturbances are decided, take place also when they are slight. A more vivid light, causing, as it does, stronger pulses of change through the optic nerve, increases the rate of respiration, and doubtless the other vital functions are simultaneously exalted. So that each nervous impression, beyond a direct response in the shape of increased action from one or more organs, calls forth an indirect response in the shape of increased action of the organism as a whole.

"Remembering that every instant the disturbance thus echoing throughout all passages of the nervous system is not solitary, but that there are many such disturbances, here arising from pressure, there from touch, in this place produced by sound and in that by light, at one part by muscular strain and at another by heat and cold, it will be manifest that, besides the few distinct waves of nervous change working their distinct effects, there are multitudinous indistinct waves, secondary and tertiary, travelling in all directions, working their indistinct effects.

"Since such reflected and re-reflected disturbances everywhere act as stimuli, we must regard the entire nervous system as at all times discharging itself. Rightly to conceive nervous action, then, we must think of the conspicuous emissions of force from parts of the nervous system that are strongly disturbed as standing out from a vague background of inconspicuous emissions from the whole nervous system, which is slightly disturbed.

"To this general nervous disturbance with its consequent general discharge, is probably due a certain general action of the motor organs. No muscles are ever in a state of absolute rest. What we distinguish as muscular motion is produced by the greater contraction of some muscles than of others. The others, however, are all slightly contracted. This pervading activity of the muscles is called their tonic state. And while we regard particular contractions as the results of particular nervous discharges, we have good reason for concluding that this universal contraction is the result of the universal nervous discharge. Of course, it is not the muscles alone on which this continuous centrifugal gush is expended. Through the intermediation of nerves connecting the cerebro-spinal system with the sympathetic system, the viscera receive their share of it. Hence the overflow of nervous energy which, without special solicitations, diffuses itself throughout the motor structures, giving elasticity to the step, and producing the concave bend of the back, the opened out shoulders, the raised head, etc., has for its simultaneous results an accelerated circulation, an invigorated digestion, and an exaltation of the vital processes at large."

But, besides supposing that this continuous centrifugal gush of nerve force produces this tonic contraction of the muscles, and, by its effects on the viscera, etc., produces that general feeling of well-being and desire for exertion which we all, I trust, frequently experience, we may, I think, be permitted to endeavour to obtain an idea—necessarily an obscure one—as to “how” it does this.

We know that when a nerve to a muscle is divided, not only is there a disappearance of this tonic contraction, and not only does it become impossible for the nerve centres to cause it to contract, but it becomes degenerated, its nutrition fails. We know, also, that if there is an increase in the amount of nerve force sent to a muscle from the nerve centres it contracts, but, as the result of this, its substance breaks down into  $\text{CO}_2$ , urea, etc. Hence may we not conclude that, since the function of a nerve is to convey nerve force, its functional influence and its trophic influence over the parts to which it is distributed are not so separable as we may have supposed?

That is to say, may we not suppose that just as the action of the solar rays on a leaf is, when in moderate amount, to produce a building up or deoxidation, and when in excess, as when concentrated by a lens, to produce a breaking down or oxidation, so the action of this nerve force is, when radiating out from the centres to the tissues in moderate amount, to produce an assimilation or building up, and when in extraordinary amount a disassimilation or breaking down? Similarly, just as the tissues of a leaf, in the absence of light, break down, so do the tissues of an animal in the absence of nerve force.

Of course there are many important distinctions, and many arguments might be brought forward against this comparison. We must remember that the influence, in the higher animals, of the nervous system on nutrition, the so-called trophic influence, is not well understood. Although all admit that certain nerve lesions produce arthropathies, muscular degenerations, skin affections, bed-sores, sloughing, etc., many arguments might be adduced to show that tissue nutrition is independent of nerve supply. Such, however, do not, I think, affect the general question as to the trophic function of the nervous system in higher animals, inasmuch as, with respect to acknowledged functions of the nervous system, they can be more than paralleled, and an experiment by Goltz, I think, shows this. In December 1873 he divided the spinal cord in the dorsal region of a puppy.<sup>1</sup> “In the following May the animal was in excellent health, and there was not the slightest indication that any functional connexion between the dorsal and lumbar portions of the spinal cord had been re-established. At the end of that month ‘heat’ came on, attended by all the ordinary phenomena, psychical as well as physical. Impregnation was effected, and the animal became gravid. The pregnancy,

<sup>1</sup> Foster's *Physiology*, third edition, p. 618.



like the heat, was marked by the usual signs,—the mammary glands enlarged, and the usual mental accompaniments of the condition were present. Finally, one living and two dead puppies were born, the first without, the latter two with assistance. The mother, however, died soon afterwards from puerperal peritonitis. The post-mortem examination showed that there had been no regeneration of the divided spinal cord; the two portions were separated by more than a centimetre. In this case, the connexion between the ovary on one hand, and the mammary gland, brain, etc., on the other, must, if a nervous one, have been furnished by the abdominal sympathetic. We may, however, suppose that the nexus was a chemical one,—that the condition of the ovary and uterus effected a change in the blood, which in turn excited the mammary gland to increased action and produced special changes in the brain.”

Be this the explanation or not, we may, I think, conclude that cases which seem exceptional are no more arguments against the trophic influence of the nervous system than are the phenomena exhibited by this dog to be looked upon as arguments against the spinal cord functioning as a conductor of nerve impulses.

But now the question is, whence is derived this nerve force, which in ordinary amount, carried to a muscle or gland, has a trophic and constructive influence, and in increased amount has a functional and destructive one? Of course, the answer which occurs to us all is, that it is the result of the combustion of the materials taken into the body as food, but we must consider this more definitely. In the first place, we may conclude that wherever chemical change is going on nerve energy is being produced. Now, chemical change is occurring in all the tissues of the body, but of these the muscles, the glands, specially the liver, and the nervous tissues, as the brain, are the principal. We can easily understand how nerve force, the result of molecular change in the brain and spinal cord, will radiate out towards the tissues; but how will the energy the result of molecular change in such a tissue as muscle be made use of? Some comparatively new observations help us here. Rumpf<sup>1</sup> showed that if in the frog the spinal cord was divided at two places, and the motor nerve roots leading to the separated portion divided, this portion became absorbed and almost completely disappeared in about a week. This demonstrates that the muscles exercise a trophic influence backward on the nerve centres, and we may, I think, conclude that from other tissues in which molecular decomposition is active a similar centripetal flow of nerve force will be taking place. Hence we can, I think, form an idea as to how the energy taken into the body as food will be made use of.

But Rumpf made some further observations. He found that if a portion of the spinal cord were separated as before, and the

<sup>1</sup> *Pflüger's Archives*, 1881, p. 415.



sensory roots divided, a similar but less marked absorption of the portion of spinal cord resulted. This shows that from the surface of the body also a trophic influence is passing to the centres; and as there the animal body is usually losing energy in the form of heat, it suggests again the idea which I on a previous occasion brought before this Society, viz., that, as in plants, there is in animals an absorption of certain of the solar radiations which impinge upon their surfaces. I do not propose again to discuss this question. I need only mention that the atrophy which occurs in the nerves and nerve-centres of special sense when the peripheral organ is removed, and such observations as those of Weir Mitchell in his article on "The Relations of Pain to Weather," may be looked upon as exemplifying it.

And now what are our conclusions regarding nutrition in man and the higher animals? These are—

1. That there is a flow of the nerve energy which produces it, from the nerve-centres to the tissues.

2. That just as the sun's rays, when falling in moderate amount on a leaf, will cause a building up, and when in excessive amount a breaking down, so this flow of nerve force, when passing in moderate amount to muscles or glands, has a trophic or building up influence, and when in increased amount a functional or breaking down influence.

3. That this centrifugal flow of nerve force is brought about, at any rate to a considerable extent, by the fact that there is a centripetal flow of nerve force from the muscles and from the skin, and that the direction of the flow, centripetal or centrifugal, will depend on the amount of molecular change in the centres or peripheral organs.

Lastly, we have to remember that we have the power of diminishing or increasing the amount of nerve force which passes from the nerve-centres to the tissues or *vice versa*. We can do this in one or other or all of three ways, by diet, by drugs, or by acting directly on muscles or skin.

Let us now see if we cannot make use of these general points as regards nutrition in connexion with the symptoms and treatment of disease.

The first example which I propose to take is *chlorosis*. The general symptoms of a typical case are paleness of the surface, palpitation, breathlessness, loss of muscular power, digestive and other troubles, associated with—and that is most important—no loss of weight, but even a considerable amount of *embonpoint*, although the amount of food taken is very small.

We can, I think, explain these symptoms by supposing that the amount of nerve force radiating outwards to the tissues is too small, and that we have in them a building up out of proportion to the breaking down, a vegetative rather than an animal process. When we look at a typically chlorotic girl with marked *embonpoint*, we

cannot but admit that she represents a large store of potential energy, yet the indisposition to mental or physical exertion, the breathlessness, coldness of the extremities, etc., demonstrate that it cannot be made kinetic.

As regards the pathology of this affection I need say nothing beyond mentioning that Trousseau and some others regard it as a neurosis, and look upon the morbid condition of the blood as secondary to the nervous affection; but the treatment is important in connexion with our paper. The indications here are obvious enough. What we desire is that more nerve force be sent to the tissues, so as to produce a proper proportion between the breaking down and building up. We have plenty potential energy; we wish more kinetic. We can carry out this indication, in the first place, by diet. A nitrogenous diet, as we all know, increases tissue change, whilst a carbonaceous diminishes it. Of this no better examples can be had than the *Banting* treatment of adiposity, and the fact that it has been found that dogs fed on such a substance as Liebig's extract will die sooner than if they have no food whatever. A nitrogenous diet, therefore, is indicated in this affection, and we are mindful that to enable this to be made use of the administration of the peptic and tryptic ferments is often required.

Next, in order to favour molecular change oxygen is necessary. We therefore insist on fresh air. Trousseau recommends the inhalation of oxygen, and we further, by the administration of iron and potash, endeavour to favour the growth and development of the red corpuscles, the oxygen-carriers to the tissues. Of the drugs which favour molecular change, strychnine is an important one, and its value in the treatment of chlorosis is well known.

Lastly, by baths with salt and mustard added to the water, friction and massage, electricity, etc., we endeavour to increase the total amount of nerve force by adding to the quantity sent from the skin and muscles to the nerve-centres.

Of course there are many other points to be attended to in the treatment of a case of chlorosis; but, looking at it as being due to the deficient amount of nerve energy sent to the tissues, producing a construction out of proportion to the breaking down, we have probably considered the main indications.

Let us now consider a case in which the opposite condition prevails, in which the destructive is in excess of the constructive. Fevers might be looked upon as examples of this, but in a rapidly progressive phthisis we can appropriately study it. Here the fever, the high temperature, and rapid pulse denote increased tissue change, whilst the loss in weight and rapid emaciation, due to disappearance of fat all over the body, shows a destructive or animal process out of proportion to the constructive or vegetative. In the treatment we advise nourishing food of all kinds, but we do what we can to increase the amount of the food which we have seen



diminishes tissue change, viz., the carbonaceous. Of such, cod-liver oil is the best example, and we favour its absorption by pancreatine, etc.

As regards drugs we can say little, as, from the many complications of phthisis, a correspondingly large number of drugs have been tried. As a rule, however, nerve sedatives are beneficial, as opium, hydrocyanic acid, quinine, etc. The hypophosphites are useful; they have a sedative effect on the nervous system, and the observation of Haubner, that cattle fed exclusively on potatoes or upon roots very poor in phosphates fail to fatten, but that they do so rapidly if phosphate of calcium is given, shows that this drug must diminish tissue change.

But although we admit that in chlorosis the general treatment is to increase, and in phthisis to diminish, the amount of nerve force passing to the tissues, we must remember that frequently treatment which appears to be contradictory of this seems to be indicated. Anæmia and phthisis may co-exist, and we must remember, also, that whilst we have the breaking down, or animal, process taking place in connexion with one system of the body, we may have the building up, or vegetative, in another. For example, in phthisis we often find that with fever and rapid emaciation, a breaking down process, we may have an enormous accumulation of fat, a building up process, in the liver. Then, also, we know that in the apex catarrh which so often, if unheeded or undiagnosed, precedes phthisis, if, along with such treatment as Begbie's mixture, cod-liver oil, and the hypophosphites, treatment which diminishes tissue change, we endeavour to cause an increase of molecular change at the affected part, as we can do by a blister at the affected apex, we can readily promote recovery.

But arguments apparently stronger can be brought against our theory. Thus the secretion of milk, a highly carbonaceous, fatty substance, is increased by a nitrogenous and diminished by a carbonaceous diet.

Again, although, as is well known, there occurs both in men and animals a tendency to accumulate fat in advancing life, and although this may be ascribed to deficient vital energy, we must remember, also, that in infants this adiposity is well marked. Spencer mentions this, and explains it by stating that at neither of these periods is vigour the greatest and digestion the best. Again, Weir Mitchell, in his work on *Fat and Blood*, mentions that his patients under treatment by massage and feeding generally gain fat and blood at the same time, yet he also draws attention to the fact that the *fat anæmics* are most difficult to treat, and that among men and animals an accumulation of fat has been observed as the result of bleedings.

Such considerations do not, I think, affect the general question that in anæmia the comparatively small amount of nerve force favours a building up process, and in phthisis the larger amount



produces a breaking down; and as evidence, also, in favour of this, we must remember the opinion commonly entertained, and brought forward prominently by Trousseau, that the anæmic condition is favourable to phthisis remaining latent, and that in many cases the cure of the anæmia means the development of pulmonary tubercle.

Other examples of disease in the etiology or treatment of which such considerations might be of value could easily be got, *e.g.*, epilepsy, and the use in it of a non-nitrogenous diet might be thus explained. Let me suggest that in antero-lateral sclerosis the thoroughly well-nourished—and I might even say over-nourished—condition of the lower limbs may perhaps be explained by supposing that the nerve energy sent to the centres by the muscles and skin of those parts is prevented to a greater or less extent from nourishing the other parts, and consequently that these limbs, with an abundant supply of nourishment, get more than their normal share.

*Reproduction.*—In connexion with this, our first object is to ascertain what are the conditions which lead to it. It seems to have been pointed out first by Wolff, a German biologist, that there was a relation between fructification and innutrition. For example, trees are made to fruit while quite small by cutting their roots or putting them in pots, *i.e.*, by diminishing their nutrition; whilst by the opposite treatment, by increasing their nutrition, they develop large stems, branches, and leaves, but are late in flowering. With grain, too much manure causes an excess of straw; too little causes the head to form too early.

This relationship between fructification and innutrition acquires corroboration from another phenomenon pointed out by Godron. This was, that when crossing takes place between animals of a different species there is a "destruction of the physiological equilibrium in favour of the organs conducive to the life of the individual, and at the expense of those conducive to the life of the species;" *e.g.*, the mule is stronger, more robust, more hardy than either of its parents the horse or the ass, but it is sterile; and in hybrid plants the stalks and leaves are always developed in an exaggerated manner as compared to the flowers. We may therefore, I think, accept this view of the relationship between reproduction and innutrition.

But now the question is, How can innutrition lead to reproduction? An example will, I think, explain this. Suppose we have a cell in a nutritive fluid. It grows by the absorption and assimilation of nutritive matter from the fluid in which it floats. It therefore increases in size, but, as it does so, what happens? We know that if we compare two bodies of similar shape but different size, their respective volumes vary as to the cube of their diameters, whilst the proportion of their surfaces is as the square of their diameters; that is, that if we take our cell we find that as it increases in size its volume increases more rapidly than its surface.

Now, of course, it is through its surface that it gets its nourishment; as it increases in size, therefore, it is getting less and less nourishment, because its surface is becoming less and less in proportion to its mass. Finally, a time comes when it cannot get a sufficient supply. What happens then? It simply breaks down into two or more pieces; but these small pieces, having a large surface in proportion to their masses, at once begin to grow, to form cells like the original one,—*i.e.*, when the nutrition of the original cell has failed, a reproduction takes place, and the death of the individual means the life of the race.

Having now seen the general principle that reproduction and innutrition are related, and having supposed how, in a general way, this may be explained, let me now endeavour to find any deductions of practical interest.

In the development of the impregnated egg we have, I think, a good example of it. The egg consists, as all typical cells do, of a wall, contents, nucleus, and nucleolus. It is a living animal structure, consequently it is undergoing chemical change, taking in oxygen and giving off carbonic acid, etc. These processes, however, in the unimpregnated condition, are taking place slowly. Suppose, now, that they are made to take place much more rapidly. What will happen will be, that a much larger supply of nourishment will be required, and the egg will accordingly divide and subdivide; *i.e.*, may we not suppose that the segmentation of the vitellus is the result of the molecular changes in the ovum being immensely increased in activity by the action of the spermatozoid?

Next, our theory may be of interest in connexion with Cohnheim's embryonic hypothesis as to the etiology of tumours.

In Zeigler's *Pathological Anatomy*, p. 250, it is stated, "We are not to refer the actual development of the tumour itself to the embryonic period, but are to attribute its appearance in later life to the persistence of germinal embryonic tissues in the otherwise mature organism. A tumour takes its rise in what we might call a belated rudiment, a focus of formative embryonic tissue, which has not been utilized in elaborating the normal tissue of the part, and so has lingered on unchanged. Cohnheim, therefore, defines a tumour as an atypical new formation starting in a latent embryonic rudiment. The tumour germs, consisting as they do of embryonic cells, may be very small, and so escape observation. It is even conceivable, he thinks, that the germinal cells may be quite unrecognisable among the ordinary physiological elements of the part. They may linger on for a long time inactive. It is only when they are favoured by the external conditions, such as the supply of nutriment and their relation to the surrounding tissues, that they begin to multiply and to form a tumour." This is Cohnheim's view; but may it not be probable that, instead of there being in the adult a piece of embryonic tissue latent, there



is taking place a continual transition process of simple cells into the various differentiated tissues, and that, in this transition, stages in which the tissues formed more or less resemble those found in the embryo are passed through. Suppose that this is the case, and suppose that at one or other of these stages reproduction occurs at the expense of nutrition, we should have a mass of tissue more or less resembling the embryonic, *i.e.*, a tumour, produced. The traumatic origin of tumours would also be explained by supposing that the injury, by impairing the nutrition of the tissue, brought about reproduction.

Suppuration is, I think, another process which these general considerations help us to understand. Suppose that from any cause the cells which form the basis of all tissues have their nutrition seriously impaired, what will again happen will be, that instead of growing and developing into a tissue, reproduction will occur, and a large number of simple cells, pus cells, will be produced. We have here a process similar to that engaged in the production of tumours. The difference we may suppose to be due to reproduction taking place at an earlier stage in suppuration.

Lastly, our theory may give us some idea as to the conditions which lead to enlargement of the lymphatic or lacteal glands. In their passage towards the heart, the lymph and chyle have to pass through several of these. Now, the function of these glands is to elaborate out of the fluid passing through them the lymph and chyle corpuscles. We have here, therefore, an example of the formation and growth of cells in a nutritive fluid. If, from any cause, the nutritive fluid is deficient qualitatively, what will happen will be, that instead of healthy lymph or chyle corpuscles, we shall have formed in these glands an excess of ill-nourished cells.

Such, then, are examples of processes on which our general considerations of reproduction may throw some light. As with nutrition, they could be multiplied.

In conclusion, I have only to state that, although well aware that there are multitudes of other phenomena to be taken into consideration, I trust that when we remember that nutrition and reproduction are the two great functions of nature, my applications of them will not be considered too wide.

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## II.—EARLY HISTORY OF THE OPIUM TRADE.

By JOSEPH EDKINS, D.D., of Peking.

(Continued from page 28.)

THE modern passion for narcotics and stimulants, there is no doubt, sprang up in Mohammedan countries, and it was in the time of the caliphs of Bagdad especially, and incidentally through the medical schools which were founded in different parts of their



empire, that alcohol and opium, both of them originally medicines, passed into use as popular stimulants. Alcohol, mentioned by Arabian physicians in the tenth century, did not excite attention in Europe till the thirteenth, so that its reign has lasted there only six hundred years. This is true both for Europe and for China. The Mongol wars had much to do with the extension of its popularity. The rough soldiery of Genghis Khan were just the men to love the excitement of this powerful and fascinating stimulant. The Tartar name *arahi* and the Indian name *arrack* are simply the Arabic word *arak*, which, again, is the Hebrew *ruach*, "spirit." We speak here of *distilled* drinks only.

In India and the islands of the Indian Archipelago arrack led the way to *bang* and other atrociously dangerous and exciting stimulants. Persian customs went into India with a Persian court and the Persian language. The features of the court life of Bagdad and Ispahan were reproduced in the Mogul empire of India. After the fall of the caliphate the Arabs continued their mercantile activity. We find that in the fourteenth and fifteenth centuries the Malays were induced to adopt the Mohammedan religion, and Mohammedan principalities were founded everywhere among the lovely islands of the Indian seas. The Arabs were busy in every place of trade from Mecca to Canton, along the whole coast line of southern Asia. Wherever there was a harbour and a market they went with drugs, precious stones, and various sorts of eastern merchandise. They thus produced in the cities on the coast of India and the islands those prominent Mohammedan social traits and customs which Europeans found there in the sixteenth century, after the route by the Cape was discovered.

Such was the state of southern Asia when Marco Polo returned home to his native Venice. He had the advantage of accompanying a Mongolian princess going to be married, who was conveyed in a Chinese imperial fleet from China to Persia. Voyages were then slow, and years passed away in making passages which now require weeks. He and his uncles set out from China in 1291, and arrived in 1295 at their home in Venice. The end of the Chinese voyage was in the Gulf of Persia. The Polos landed here, and returned to Europe by way of Teheran. A few years later a Chinese fleet went by nearly the same route as far as the Gulf. This fleet was sent by the Ming emperor Cheng Tsu under the charge of a eunuch named Cheng Ho. He had under him 20,000 troops, and the fleet amounted to 62 large vessels. In A.D. 1405 the fleet left Sucheu. Cheng Ho visited a large number of ports where Arabian trade was carried on. The Chinese history says that his ships were 440 feet long and 180 feet wide. There must be exaggeration here. Dutch ships two centuries later are, in the same history (the *Ming Shi*), said to have been 300 feet long and 60 feet wide. Whatever their true size, these ships certainly went, early in the fourteenth century, to the ports of the Coromandel and

Malabar coasts, to Bengal, and to the ports of Persia and Arabia. An imperial circular letter was addressed to the chiefs of the various ports, announcing the accession of the emperor Cheng Tsu to the throne of China, and requiring them to send embassies of congratulation and submission. In case of refractory behaviour the Chinese envoy was directed to use force. The chief reason for this was dynastic pride, but the display of force and its use in several instances would help the Chinese merchants in distant ports to attain a higher place in public estimation. The Chinese envoy went and returned several times, probably continuing his voyages as long as the ships which had been built for the purpose of making them were in a condition fit for the service. These expeditions would help forward commerce, and merchants, when protected, would make voyages more willingly. Chinese ships are built in compartments, which are separated by bulkheads stretching from one side of the vessel to the other. Each merchant fills his compartment, and pays his rent accordingly. Many would go in the emperor's ships, others in vessels chartered for the purpose. At that time the opium trade of India was beginning. The Portuguese found it existing, at the end of the fifteenth century, on the Coromandel coast, in Bengal, in the Malwa region north of Bombay, and in Persia. Chinese envoys and traders visited all these regions at the beginning of the fourteenth century, and we know that the Mohammedans had introduced the trade and the manufacture of opium at all these points, for the Portuguese found the poppy growing there, and a steady demand for opium existing.

Barbosa, who has the repute, doubtless well deserved, of being a faithful and intelligent observer, speaks of this drug under the name *amflam*. In his account of the early Portuguese trade with Malacca he enumerates it among the articles brought by the Moorish and other merchants from the western coast of India to exchange for the cargoes of Chinese junks. It was also brought from Arabia to Calicut, in south-western India, besides being conveyed to the same place from Cambay, in north-western India, where the Malwa poppy cultivation, since developed so extensively, had then commenced. Barbosa quotes the prices. He says that the opium brought from Aden is worth each farazuola from 280 to 320 fanoes, and an inferior sort made in Cambaya from 200 to 250 fanoes.

Opium is also mentioned in the accounts of the early Portuguese trade as produced at more than one port on the Madras coast. It was then an export from Meliapur and Negapatam to Pegu and Siam, where the practice of taking opium pills must have then become extensive.

Beginning in Persia and Western Asia in the thirteenth and fourteenth centuries, the custom of taking opium pills as a confirmed habit must have spread in most of the countries which, by war or trade, had then become Mohammedan. Wherever we find the



trade extending, there we must expect that this unhappy slavery to a drug which Kämpfer so graphically describes had already commenced. Wherever the Arab traders went with their wares, there was either a demand or a demand might be created. Wherever the poppy grew might be found the Arab traders residing as merchants, and either cultivating it themselves or employing others to cultivate it, to be exported with other produce of the region. The fascination of the drug produced widespread mischief, before smoking it was thought of, wherever it became a popular stimulant. The poppy will not grow in India as a wild plant, because it is an annual suited to temperate climates. It could not be retained in India if the demand for opium were to cease, not being capable of naturalization. At first the crops of Arabia and Persia were enough for the demand. When the Arabs extended their trade eastward, they commenced the cultivation in favourable localities contiguous to harbours and convenient for trade.

This was the reason that the Portuguese, and afterwards the English and other nations, took up this trade. A demand for this pernicious drug had already been created.

In the year 1578 the celebrated author of the Ming dynasty *Materia Medica* completed this great work of his life. He is named Li Shi Chen. He has an elaborate article on the poppy, and another on opium. He noticed the three epochs in the history of this flower, the time of imperfect knowledge and limited medical use, extending from the seventh to the eleventh century, the time of clear information in regard to the properties of the poppy capsule and its extensive use as a sedative in abdominal diseases in the twelfth century, and the time when opium was introduced from Mohammedan countries, in the fifteenth century, under the names *Afu yung* and *Ya pien*. It is the outer skin which yields opium, and it is just this which he recommends to be used in the form of a decoction with honey. He quotes an earlier author as saying that this medicine kills men like a sword. Hence there is no room for question in regard to whether the poppy he means is the opium poppy or not. He notices its extensive use in rheumatism and asthma, but it was found in the Sung dynasty to be marvellously efficient in dysentery especially. The author alludes to the use of opium pills for aphrodisiac<sup>1</sup> purposes in his day in Peking. This was one chief reason of its growing popularity. At the same time it was advertised as a panacea and golden elixir, with the assurance that there was no pain or disease which it could not cure. It was a powerful temptation then to take these wonderful pills, as it was 150 years later to smoke in the newer fashion. Pills preceded smoking, and worked immense mischief on individuals. The moral effects were most disastrous on them. Medical writers took note of what was happening. There was, however, no public alarm or

<sup>1</sup> Opium has, then, been used in Peking for vicious purposes for more than three centuries.



ground for legislation. These were reserved for the eighteenth century.

This growing love of opium pills led to an active traffic. In 1567 the Portuguese and other European nations were admitted to trade. In 1575 a tariff was arranged by the Chinese government. After fourteen years this tariff was revised, and its details are printed in a work of the period, *Tung si Yang Kau*, "Account of the Eastern and Western Oceans." Pepper was admitted at a duty of one-fourth of an oz. of silver for a picul of 133 lbs. Opium was admitted at two-tenths of an oz. for  $13\frac{1}{3}$  lbs. About sixty articles are charged a duty. The tariff was arranged at about two per cent. on the value of goods. In a later revision in A.D. 1615 there was a reduction of duties on all articles, opium being among them. The rate for opium was lowered one-eighth. Such was the system when, in the latter part of the sixteenth century, European ships began to convey opium to Chinese ports.

In several works of the period the process of making opium is described, so that any one who cultivated the opium poppy would be able to produce the drug with no difficulty. There is no good reason to doubt that opium was thus made in China at that time. The description of the process is found in *Tung i Pau Kien*, "The Corean System of Medicine," based on Chinese works, and published in China at the end of the sixteenth century. It is also found in *Li Shi Chen* and in *Wu li Siau Shi*. The first account, however, is in a book by Wang Si not now obtainable. He wrote in the latter half of the fifteenth century, and died in 1488, a century before the opening of trade to foreign ships. He mentions two processes, one with knife, bamboo scraper, and small porcelain cup, in the spring. The other is an Arabian mode, performed on the capsules of a red variety in the autumn. This difference in the time of year Li Shi Chen refers to difference of climate. The implements mentioned in these descriptions are all Chinese. The process is simple. The Persian knife with five edges, used to make five parallel cuts in the ripening capsule at one time, of which Kämpfer tells us, is not known to Chinese authors. The fair conclusion seems to be that in the fifteenth century, before the arrival of the first European ships in the East, the Chinese made opium. But it was also imported by the Mohammedan traders and in Chinese junks voyaging to the Indian seas. Then as now the Persian and Indian opium would be found more powerful than the native, and would naturally command a higher price.

Early in the seventeenth century there resided in Batavia a learned and enthusiastic Dutch physician named Jacobus Bontius, who wrote on natural history and the art of medicine. He was an intense admirer of opium as the most effective of all drugs for medical practice in the East. Half a century before Kämpfer's time he found opium in great demand among the rich and poor. The poppy was cultivated, and the poorest among the people ex-

tracted by decoction a very inferior sort of opium from the leaves and stumps, which they dried in the sun for use. From his account it appears that the habit of taking opium pills had extended greatly among the natives of whom he is speaking, the rich using an expensive and pure opium, while the poor took a kind cheaply made and low in quality. This was the consequence of the trade with Persia bringing opium and other productions of that country to Java. Many years before the origin of opium-smoking we thus learn that at Batavia the native population had to a large extent adopted the habit of taking doses of opium. Can we wonder, then, that in China, when trade with Indian and Persian seaports was opened in the sixteenth century to all nations, there was a steady demand for the drug? When we recollect that in the fifteenth century opium was already known in China for its remarkable medical effects, and the process of manufacturing it understood, we can only expect to find, in these circumstances, the same results as in Batavia. The poor and the rich falling into the habit of constant doses, the demand for the foreign drug coming in Chinese and Mohammedan vessels would steadily increase, and incessant efforts would be made to supply a native article. When doses of opium at regular intervals are indulged in by the poor, the fatal daily drain on their finances drives them to every expedient to supply their craving at a lower price. The poppy was at hand in all its varieties, the white, the red, and the purple. The climate, however, is not so suitable as that of India. The native opium has consequently only been able to compete with the foreign in those parts of the country which are distant from the coast.

All this time the whole import did not amount to a hundredth part of that which it is now. We have, however, been tracing its beginnings. The mischief that was to result from opium was still not developed on a large scale. It was necessary to wait for the appearance of tobacco before the character of opium as an enemy of the human race could be adequately revealed. Tobacco entered China from the Philippine Islands about A.D. 1620, and spread rapidly, first at Amoy and in Formosa, and afterwards in various parts of the empire. Tobacco-smoking arrived in China at about the same time as in England. The Dutch soon after this had settlements in Formosa. Fort Zealandia was built in 1624. In 1657 the Chinese independent chieftain Koxinga prepared to attack them, and continued a war of extermination till, by sheer force of numbers and perseverance, he succeeded. Among the 500 prisoners put to death by the orders of Koxinga at the end of this war were many clergymen and schoolmasters who had been engaged for several years in teaching the native population. After this time, while the island was governed by the bold chieftain Koxinga and his son, as well as later under Manchu rule, foreign trade continued. The usages of Batavia were transferred to this island, and in particular the vicious indulgence in an opium debauch, which is described by Chinese



authors of the eighteenth century. Hemp and opium were used together, and to these was added a part of the cocoa-nut palm which possesses exciting qualities. This compound was smoked with a bamboo pipe. Soon the smokers felt a craving which was only extinguished by a new indulgence. They became enslaved ere long. They felt a delirious excitement which lasted through the night. The aborigines, longing for licentious pleasure, found in this the means to promote it, but suffered inevitably the wasting away of their strength, and their features assumed a shrivelled appearance for which there was no remedy. Nothing short of death could cure the love of opium. Often did the magistrates issue in vain prohibitory proclamations. If these unfortunates were beaten by order, they would beg a moment's respite to smoke again before the sentence was carried out. It was from Java that this destructive habit was conveyed to China. Such is the Chinese native account.

Things became worse in Formosa, till it was necessary to memorialize the emperor Yung Cheng. This emperor, A.D. 1729, issued an edict prohibiting the sale of opium and the keeping of opium taverns. The punishment for the one was banishing after wearing the heavy collar for a month. That for the other was death to the principal, and banishment to accessories. The next year another edict appeared. Trouble arose from the entrance of too many Chinese into Formosa, recently become a part of the Chinese empire. Those who were without families were ordered back to the mainland. Many crimes are enumerated in the edict. Brotherhoods were originated for dangerous purposes. The aborigines were engaged to assassinate obnoxious persons. There were anonymous libels placarded. There were houses for receiving stolen goods. There were those who sold opium. All these things, with others, were prohibited, and punishments ordered to be inflicted.

During last century several important new books were printed by the Chinese government bearing on medicine in whole or in part. Among those published before the prohibitory edict of 1729 was the *Tu Shu Chi Cheng*, the immense compilation a copy of which was bought recently by the British Museum for £1500. The account of opium contained in Ming dynasty books is here repeated, with several medical recipes for the use of opium by the physician. On the other hand, books published after the time of the edict make no use of opium in recipes, but employ in prescriptions the capsules of the poppy as before. This use of the poppy capsules has been retained ever since, and the opium poppy has been cultivated, for the purpose of obtaining them, in many parts of China. The sale of opium as a drug probably ceased in the apothecaries' shops from the time of the edict, but the capsules could be purchased as before. At present some shops in Peking are supplied with capsules from localities where opium is produced in quantities not small. Some come from places in Chili province,



and others from the province of Shansi. The same cultivators who provide the apothecaries with poppy capsules provide opium-smoking establishments with opium. Before the prohibitory edict in 1729 the native cultivators would supply apothecaries with both capsules and opium according to the demand, the trade in opium being then legal. This was a necessity in places far from the coast, where imported Indian and Persian opium could not be procured. The recipes in medical works required this, and the druggists could not do without it. There need be no doubt felt on the point that opium and the capsules were provided by Chinese cultivators for the druggists from the fifteenth century, the time when Wang Si lived, downwards.

The "great poppy plague," as it has been called, began, so far as we can trace it, in Persia, and spread with the Arab trade throughout south-eastern Asia and the islands of the Indian Archipelago. It reached China in the fifteenth century, and from that time the Chinese had both native and foreign opium. Tobacco-smoking in the Philippine Islands spread to Java before the sixteenth century was finished, and to China at the beginning of the seventeenth. Opium-smoking began in Batavia, and was conveyed from thence to Formosa about 1720 or a few years sooner. The evils springing from it soon led to local prohibitions, which were not long after changed for an imperial prohibition, and this still, 153 years later, has the force of law, though many new laws on the subject have since been made.

This narrative may be best closed by the utterance of a fervent wish that the British government and all British merchants may soon cease all participation with a trade prohibited by law, and the cause of incalculable harm to many millions of the Chinese race. The older the evil the more difficult to be eradicated. That it is difficult to eradicate is plainly set forth by the Rev. Griffith John in his opportune pamphlet, recently published, on the opium traffic. The liberty allowed to native cultivators to extend the growth of the poppy has led to an enormous production, which is at least double that of the imported article. It appears to the viceroys and governors of provinces a better policy to allow the native growth to extend than to carry through to their full extent the principles of the emperor Tau Kwang, who desired and intended strict prohibition and final abolition. The reports of Her Majesty's consuls in Western China amply prove this point. On the immense yield of opium in that part of the empire only seven taels of revenue per picul are collected till it passes some custom-house on the way to another province, and then a sum is levied which it is said may be compared with the amount raised on foreign opium at the custom-houses under foreign inspection and manned by a foreign staff. The appeal to the moral sense of the British Parliament must not be based, then, on the sincerity of the Chinese government in the intention to eradicate the opium manufacture and

opium-smoking from their country. It must be based rather on the fact that the modern opium traffic grew up in defiance of law, that England fought against China in the interest of smugglers and an illicit trade, that the present trade is injurious to millions, and is every year destroying the happiness of an increasing number of persons, and that it will be greatly for the good of China and of England that this traffic should cease.

As an instance of the harm done to China by the continuance of this traffic, take the trade returns for the last year, 1881. In Formosa, where there is a mixed population of Chinese colonists and aborigines, there were imported 3738 piculs of Indian and Persian opium; of this quantity 1856 piculs were Persian. In 1872 only 1941 piculs were imported, and of this 417 were Persian. These are the statistics of the port of Takow. At Tamsui, in the same island, 2142 piculs were imported in 1881. Of this quantity 447 were Persian. In 1872 the imported quantity was 1400 piculs, and of this 121 were Persian. The very rapid increase of quantity was partly due to the wants of large bands of labourers engaged on new fortifications, but also seems to show that the mountain aborigines, a race of people akin to the native tribes of the Philippine Islands, as we know from their language, are becoming infected with the vice of opium-smoking. At Ningpo, where there is a powerful staff of missionaries, the import of opium for the four last years has been, for 1878, 7251 piculs; for 1879, 7667 piculs; for 1880, 6258 piculs; for 1881, 8628 piculs. At Shanghai, in 1881, there were imported for local consumption 13,396 piculs of foreign opium and 2000 of native, an increase on the whole of about 2600 piculs as compared with what it was in 1873. This growth in the traffic means distress and bodily deterioration, a narrowed income, and reputation sacrificed, to thousands of new victims to this perilous and delusive fascination. Shall England continue to encourage all this because she will not amend her system for collecting her Indian revenue?

As an illustration of the danger to England herself of continuing this traffic, take the facts recently gathered with laborious care by Messrs Baber, Spence, and Parker, and which will be found in blue-books already published or soon to appear. In four provinces of West China a quantity of opium is now produced annually which is more than twice as much as the whole foreign import to China. By the estimate it amounts to 224,000 piculs. The intention of the Chinese government is to drive out the foreign article by encouraging the native growth. This is shown by the cessation, in 1867, of government efforts to repress poppy cultivation in the province of Szechwen. The viceroy of this flourishing province, in taxing native opium, is content with a little less than a fourth of the duty levied on foreign opium on its arrival. But it must be consumed at home. If it passes eastward to other provinces it is subject to an impost equal to that raised on the foreign article.



Under his administration a million and a half ounces of silver, equivalent to £375,000, are raised in that province alone upon opium. If a vast smuggling trade did not exist, this sum would be much increased. At the ports of China a sum amounting to about £700,000 is now, as appears from the trade reports, collected in duties, at the normal rate of thirty taels per picul, by the foreign branch of the Chinese customs. This sum would be a million if the opium imported in native vessels from Hong-Kong were included. If to this be added the Lekin tax all over the country wherever opium passes the custom-houses of the interior, it is probable that the government of China receives from opium too large a sum ever to be able to give it up without a very serious derangement of their finances. The reason why they collect so little from the native opium is that they desire to see the foreign article driven out of the market by being undersold. When the import of foreign opium has been seriously curtailed, it will be easy to levy a heavy tax on the native-grown drug. This would be viewed as a justifiable measure, because it would be suited to discourage the practice of opium-smoking, and a very large revenue could thus be procured. The remedy is in the hands of the Chinese government. It certainly appears possible that after a few years Indian opium may not be wanted in China. It is the part of wisdom to be prepared for this contingency, and to regulate Indian finance on principles of a permanent nature. To risk a sudden fall in an item of income so large as the opium revenue in the Indian budget is not wise. Native opium holds unrestricted sway as a stimulant in Western China. In a few years it may be made to suffice for the craving after this base excitement in Eastern China too. If China is resolved not to pay India several million pounds sterling per annum for India's good and China's injury, England ought at once to resolve to free India, by the establishment of a better financial system, from this unworthy resting for her prosperity on the unwilling gift of a resentful neighbour. The knowledge of the spread of opium-smoking in British Burma and the way in which it has been effected have done much to open England's eyes to the inevitable evils of the existing system. Since India has now entered on a kalpa of material prosperity, it is just the time for this necessary reform to be energetically commenced. The world looks to England to maintain her position in India by honourable methods, by economy, by the promotion of useful industry and virtuous habits among the people, by a safe and wise finance, and a steady adherence to justice and goodness.

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### III.—ON THE RADICAL CURE OF HERNIA BY SPANTON'S METHOD.

By ARTHUR NEVE, L.R.C.S. & P. Ed., Mission Hospital, Kashmir.

IN England, where the best fitting appliances are obtainable by all, the radical cure of hernia has not the same primary importance as in remote and uncivilized regions. I presume, indeed, that it will continue to be the rule that only cases in which a truss does not afford efficient support, or those liable to recurrent attacks of strangulation, will be submitted to operative measures.

In this country the conditions are very different. Well-fitting appliances cannot be obtained by the natives, and even if given to them would probably not be worn. Hence, if it is possible to operate without danger, and with fair chance of success, it is desirable to do so in every case that presents itself. From time to time many papers have appeared illustrating the performance of the various methods, Wutzer's, Wood's, or by antiseptic catgut suturing. Lately, Professor M'Leod of Calcutta, in the *Ind. Med. Gazette*, has forcibly advocated a method of direct operation which was noticed in the *Lancet* of April 14, 1883, and which is in many features peculiar to himself.

In the choice of an operation of this kind, the chief elements seem to be the danger or the safety, the simplicity or the complication, and the proportion of success. But above all the safety. Only if the risk is very slight can it be admissible; whilst, if safe, a considerable proportion of failures do not militate much against its performance.

For a succinct account of the various earlier operations and their principles I would refer to Mr Spanton's article, *Brit. Med. Journal*, page 920, vol. 1880. He does not, however, deal with some of the more recent attempts inspired by the grand results of Listerism and the use of catgut for sutures. Of these, perhaps, Professor M'Leod's operation may be taken as a fair type. It is claimed for it—

1st, That it is direct, all the steps being under the observation of the eye. This, however, involves a considerable incision, and it is scarcely possible to have more accurate information than the invaginating finger can supply.

2nd, That the boundaries of the canal are brought together without any intervening material; and by means of catgut—an agent which itself undergoes organization, and contributes to the strength of the valve-like boundaries of the canal. But, apart from the organization of the catgut, which it can scarcely be admitted is a source of much strength, the adhesion produced by a non-irritating ligature connecting the pillars at usually only one point in each side is not likely to be of a very enduring character.

The 3rd claim is mainly a negative one, having no bearings upon a comparison with Spanton's method.

4th, That the sac is completely obliterated. In Spanton's operation properly performed this is equally the case.

5th, That the position of the wound in the abdominal wall, not in the scrotal, obviates the risk of septic suppuration in an awkward and dangerous situation. Nevertheless we find that in 28 cases 3 died of septicæmia and 1 of carbolic acid poisoning, and in many cases the scrotum became involved.

An analysis of the cases adduced by Professor M'Leod is more instructive than a criticism of the arguments employed. Let me deal only with the 18 cases of reducible hernia (Class C.) I find that 2 died from the results of the operation. That in 5 cases there was putrefaction and suppuration. In 4 of these cases, and 3 others, the scrotum had to be tapped, or incised subsequently, for bagging of matter or accumulation of serum. That of 8 cases which healed by first intention 2 recurred. Finally, that the average number of days spent by the patients in hospital was more than 55. When such limited success is attained in such able hands, it is not encouraging to those less skilled. I should consider the performance of the operation by such inadmissible. Considering the position of the wound, and the frequent failures to maintain asepsis, it is wonderful that a greater fatality did not result. May I append brief notes of my experience during the past year with Spanton's screw instrument for radical cure. His operation was first adopted out here by Dr Downes, whose success encouraged me to persevere in it.

During the last year 9 cases have been operated on by me by this method in the Mission Hospital. These were all cases of reducible hernia. The following particulars are best shown in a tabular form:—

| Age.      | No. | Sex.  | Position.                | Character.  | Size.             | Days in Hospital. | Result.                |
|-----------|-----|-------|--------------------------|-------------|-------------------|-------------------|------------------------|
| 2 months. | 1   | Male. | Right indirect inguinal. | Congenital. | Of orange.        | 18                | Cured.                 |
| 1½ years. | 1   | "     | "                        | "           | Of pear, small.   | 8                 | Recent cure.           |
| 2 "       | 1   | "     | "                        | Acquired.   | Of orange.        | 9                 | "                      |
| 8 "       | 1   | "     | "                        | "           | Small.            | 29                | Cured.                 |
|           |     |       |                          |             |                   | 24                |                        |
| 20-30 "   | 4   | "     | { 2 " 2 left "           | { " }       | Medium and Small. | 16 11 31          | { 3 cured. 1 recurred. |
| 50 "      | 1   | "     | Left "                   | "           | Of cocoa nut.     | ...               | Recent cure.           |

In most cases the patient was, as soon as seen, put upon the operating table, and the operation was at once performed. It is the character of a Kashmiri that he will usually submit to any operation, if urged with some authority, on the moment. But



if the operation is delayed for even a few hours he will often try to slink away. With women it is still more the case, and to secure the children it was necessary to do them when they were brought. An operation of such extreme simplicity offers no contra-indications to such a practice. I never use the spray while doing it. The performance of the operation, including the incision in the scrotum, partial separation of the sac, introduction of the indicating finger and insertion of the screw, scarcely occupies two minutes. The ring usually admits of two points on either side being approximated by two complete turns of the screw. As this is done the pillars are felt not merely to be brought in contact, but to be rolled over one another, and the finger is squeezed out of the opening. One or two more turns are given, and the point brought out of the scrotal wound. In all these steps Mr Spanton's instructions are closely followed. A strip of lint soaked in carbolic oil, wound round the points, is the only dressing.

In only one case have I observed any constitutional disturbance following the operation, and pain is seldom severe, sometimes altogether wanting. The first man I operated on ran away from the hospital in the evening, and only returned two days afterwards on finding he could not withdraw the instrument himself. His is the case which is marked as recurring. I had not been sufficiently bold in securing the ring, and a small protrusion soon began to appear on the upper and outer side. When last seen it was about  $\frac{1}{4}$  of the size of the original hernia, and caused no inconvenience. Recently the mothers of two children, who had been operated on the same day, tried to escape at night, evidently under the impression that the children were cured, and the screws to be regarded as fixtures.

By the third day there is always some swelling and hardness over the screw, and a few drops of pus exude. The instrument is withdrawn from the 5th to the 8th day, and the sinus quickly closes. In no case has there been any accumulation of pus, sloughing of skin, or bagging of fluid in scrotum. The swelling gradually lessens, but the hardness remains, and conveys an impression of great security. This has been especially the case after a considerable amount of inflammation and suppuration, and I have noticed that the cicatricial induration has been such as to make the spot operated on decidedly stronger than some of the parts immediately around. Of the obliteration of the neck of the sac in this operation I entertain no doubt whatever.

The instrument I am now using is of a pattern I suggested to Dr Downes a year ago. I have since heard that Mr Spanton has modified his instrument in a similar way. The point is very sharp, giving precision as to the point of piercing the pillars of the ring. The first turns of the spiral are open and from  $\frac{3}{4}$  to  $\frac{1}{2}$  inch diameter, the last three are closer and about  $\frac{1}{4}$  inch diameter. Thus the sides, however relaxed, are easily secured; every turn of the screw brings



them nearer, and when fully introduced the instrument keeps them in forcible contact. I believe that the original instrument was practically nearly or quite as efficient in this respect, and the form I have had constructed (by native workmen) is no great improvement, though theoretically more perfect.

The lack of precision in speaking of results must detract from the value of these notes. Three of the cases are too recent for results to be noted. All that can be said is that the opening is closed, with no apparent tendency to yielding, and the sinuses healing as in previous cases. Of the other cases, one recurred, as mentioned above, at an early period. The remaining five are marked "cured." This, however, simply means that when last seen there was no discoverable tendency to recurrence. We cannot keep them under observation. It is probable that if the tumour did return to the extent of giving inconvenience they would show themselves here, there being no other place in the country where they could obtain treatment, but that if the part only yielded slightly, and no discomfort resulted, that they would not again apply. I certainly, however, am not prepared to think that there can have been or will eventually be recurrence in more than a small proportion of the cases operated on, and hope that my small experience may contribute to show that in Spanton's operation for radical cure of hernia, we have a method devoid of danger of death, almost without risks of any serious results,—a method of singular simplicity of detail and ease of application,—a method adapted for the congenital hernia of the tube, as for the large tumour and lax tissues of the old, and far more suited than more delicate and perhaps more precise operations for the requirements of country or colonial practice, in which it might well replace the palliative measure of truss or bandage with which the profession has too long been satisfied.

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#### IV. — NOTES ON TYPHOID FEVER, SUGGESTED BY A RECENT EPIDEMIC AT NEWTON HEATH, MANCHESTER.

By JAMES NIVEN, M.B., M.A. Cantab., Fellow of Queen's College, Cambridge, formerly Assistant Medical Officer to the Deptford Fever and Smallpox Hospitals, London ; and ALEXANDER WALKER, M.D., etc.

*(Continued from page 997, Vol. xxviii.)*

Now to come to typhoid fever. In one of our patients, a boy, C. H., the tonsils at the commencement of his attack took on the appearance in Mr Niven's case, and Dr Walker was at first inclined to suspect diphtheria; but in four or five days the pultaceous material cleared away, and he then came to the conclusion that it had been a form of follicular tonsillitis. We have both seen slight follicular tonsillitis on other occasions. Of two patients seen by Mr Niven in January 1883, the throat of one was covered with

pultaceous material, and the tonsils in the other case were red and swelled. The second case was of about four weeks' standing, and there could be little doubt that the throat had divested itself of a similar covering. These facts are confirmed by observations at a London fever hospital on typhoid fever.

The following cases will further illustrate this matter:—On 20th December 1882 we saw seven cases under Dr Walker's care. Up to this date he had remained undecided about their nature, which appeared thus. In house No. 1 were three cases—a girl, E. W., taken ill on 20th November with shivering, headache, and weariness. Seen first on 22nd November; temp.  $102^{\circ}$ ; pulse 140; two loose stools. 23rd November.—Cervical glands enlarged; tonsils covered with white patches; breath offensive; pulse 130, thready. In a few days the patches cleared off and the child seemed well.

About 30th November Mr W., the father, took ill with headache, sore throat, and thirst. The same appearance of the throat developed itself as in E. W. Recovery was equally rapid.

On 18th December another child, a boy, took suddenly ill with vomiting and purging. The same appearance of the throat developed itself. When we saw him on 20th December he had a well-marked scarlatinal rash, so that the cases were now clear.

In house No. 2 there were two cases of diphtheroid throat, one of them of some standing, whose throat was now clean. In the other case it was the third day of illness. There was no rash; there had been no vomiting; the child had somewhat quickly taken ill; the tonsils were covered with pultaceous material; the uvula and soft palate were vivid red; the temp.  $103^{\circ}$ ; pulse rapid. We found that the clothes of these children had been taken to wash to a house where a child is laid up with severe nephritis consequent on a well-marked attack of scarlet fever. This child is in house No. 3.

In house No. 4 is a case similar to the above, just opposite No. 3. This is scarlet fever.

In house No. 5 is a really doubtful case, though it is most likely scarlet fever. In none of these cases is there as yet any desquamation.

These throats are, as we have said, a form of follicular tonsillitis. In smallpox, it is probably due to the eruption settling on the follicles, and this circumstance would explain the rapid disintegration of the tonsils in that disease.

We will now be pardoned, we think, for inquiring what is the significance of the fact that the tonsils are so prominent in the history of many diseases. Are they affected secondarily or primarily? Are they urged by the presence of a virus passing round with the circulation to inflammatory action? or are they the original nidus of contagium, the *fons et origo mali*?

They are beautifully situated at the commencement of the



alimentary and respiratory tracts, in a grotto with steep thin-edged walls. Any materials passing downwards would be liable to be arrested there, and, getting into the sensitive follicles of the gland, might form the nest-brood of a disease. This would fit in with the occurrence of certain throats at the commencement of typhoid, and with the cases observed by Dr Walker eleven years ago. We do not at present see the importance of this question, but it may turn out to have been worth asking.

6. *On the Specific Nature of the various Fevers.*—There is little doubt now that typhoid, scarlet fever, diphtheria, etc., owe their character to organisms of a low nature. We are mostly all believers in the germ theory to this extent. The *de novo* theory now takes the shape of asserting that organisms of an indefinite nature develop under favourable circumstances into those of typhoid, scarlet fever, and diphtheria. The weight of evidence, we think, greatly inclines to the side which holds that, through whatever developmental processes the germs of these diseases have attained to their present position, they are now definite, and go through a definite life cycle. The negation of this view relies on such statements as these: that typhoid springs up where it could by no possibility have been conveyed; that infected liquids serve to produce not only typhoid, but scarlet fever and diphtheria; that cases of an indefinite type, such as we have mentioned, occur.

As to isolated cases arising where no possibility of infection could have occurred, they are to be regarded with the greatest suspicion. The infection might have been carried in manure or otherwise to the infected places from previous cases, themselves perhaps not suspected. It is always to be borne in mind that many cases of these diseases are, so to speak, latent. Moreover, in a good few instances, where the origin of an outbreak has seemed obscure, skilful search has carried the seat of infection further back, as in the outbreak at Caius College, Cambridge. Our knowledge of the manœuvres of the infective material of these diseases is by no means complete. On the other hand, to accept the *de novo* view compels us to face such a situation as this: "A number of manure-heaps and putrid accumulations are subjected all over the country to similar conditions, so far as we know. Out of a certain number of these the organisms therein contained take on specific characters; in the others they don't." The proof must be exceedingly complete which will make us believe this. In our view it is exceedingly incomplete.

As to infected liquids carrying typhoid, scarlet fever, and diphtheria simultaneously, we find nothing surprising in that. Unquestionably, different materials afford quite a different pabulum and excitation to growth; and where neglect has exposed a liquid to the operations of one virus, it is not at all improbable that it will be invaded by another. Again, cases of an indefinite type, such as we have mentioned as occurring, proves nothing to our mind.



For example, consider only how multiform are the symptoms presented by different cases of tuberculosis; yet, to our mind, Koch has rigidly established their identity and dependence on a specific organism. Recent criticisms cannot invalidate this result, achieved with the strictest adherence to the highest demands of logic.

The most recent form of the *de novo* view has been skilfully delineated by Mr Kenneth W. Millican in a paper in the *British Medical Journal* of 30th September 1882; and this serves to suggest to us that the indefiniteness of the disease is occasionally due to errors in diagnosis. For instance, although, in our throat cases of 20th December, the throat was diphtheroid, the temperature, pulse, and course of the disease were those of scarlet fever. Again, in a case given by Mr Millican, he tells us that the same case comprised diphtheria, typhoid, a typhus rash, and smallpox.

Stated as we should state it, it was a case where there happened the unusual concurrence of typhoid fever and smallpox, the typhoid fever being accompanied by follicular tonsillitis, and the smallpox by an initial eruption. The case recovered.

In that case he regards the smallpox as probably arising *de novo*. That throws considerable doubt on the *de novo* origin of the typhoid. He is inclined to regard the fact that the older physicians did not distinguish between measles and scarlet fever as a proof that they were not then separated. Yet Murchison, in an admirable historical essay, while upholding the *de novo* origin of typhus and typhoid, as he scrutinizes a period when those diseases were confounded, shows not only that they were distinguishable, but that occasionally they were distinguished.

Still Dr Walker's experience eleven years ago indicates a change of type happening within a short period. Now, in the course of experiments on animals it has appeared that the duration and severity of the inoculated disease is dependent on the amount of material inoculated. It may be that our suggestion of the pillars of the fauces intercepting a scanty amount of virus, which lodges and breeds a mild disease in the tonsils, is correct. It may be not. It may be, again, that the organism of, say, scarlet fever, goes through successive stages of a life cycle, and that it may stop short of its full maturity and give rise to a form of the disease whose symptoms are due to the germ-group not having attained its proper place in this life cycle; or it may be that, as in M. Pasteur's inoculation process, the germ, while retaining its physical identity and potentiality of malignancy, has temporarily undergone a change as regards some of its properties. But there is no evidence in the history of the disease pointing to a *de novo* origin, and, taking all things into account, little probability of it.

7. *Speculation on the Fever Chart of Typhoid.*—The question of the cause of the high temperature in typhoid is a complex one. We shall assume, what almost no one now disputes, that the great weight of evidence points to the dependence of typhoid fever on

the presence of a specific organism. With this assumption we may state that the increased production of heat in a typhoid patient is dependent on three causes—(1.) On neurovascular changes; (2.) On the presence of the specific organism; (3.) On increased metabolism of the tissues.

As to (1.) It is an intricate question how far an inflammatory change in any part of the body is independent of all neural influence except such as inheres in the vascular walls themselves; or, again, whether it is under the dominion of the vasomotor system, as Heidenhain's investigations tend to show; or whether there is some separate neurotoxic part of the nervous system regulating changes of temperature. Anyhow, it seems clear that people vary considerably in the change of temperature which the same apparent amount of disease causes, and it is possible that those exceptional cases where a small amount of bowel change has been associated with high fever may be assigned to individual peculiarities.

As to (2.) It is evident that the presence of an enormous colony of microzymes multiplying very rapidly must produce a large amount of heat. It does not follow, however, that there would thus be produced a rise of temperature, since their presence and products might arrest tissue change, or otherwise produce loss of heat.

(3.) This, however, in most cases at least, does not occur, and in typhoid fever the normal changes—probably all the degenerative and some of the reparative—are increased. The great amount of local changes in the bowel is of itself sufficient to account for a considerable rise of temperature. But, besides this, there is evidence of abnormal activity elsewhere. Thus the enlargement of the spleen, the granular condition of the liver and its increased power of dealing with alcohol, as well as the increased production of urea and uric acid, the wasting of the muscles, and in some cases of the brain, all point to increased change everywhere.

This general metabolic activity is in its turn dependent on the other three factors concerned. The question, then, arises, Can we separate these factors? To this question we must give a negative answer. Nevertheless we incline to believe that, in certain cases, the first factor may be eliminated—for example, in the large number of cases where intelligence is completely retained, and where there is often a desire to get about. Here we may assume that the nervous influence after a time becomes normal.

Is the rise of temperature here due to the bowel changes mostly or to the organism mostly, or what relation exists between the two? This question we cannot answer, and it may be doubted whether it admits of answer. On the one hand, in relapsing fever, where there are no special local lesions the temperature often attains a great height; and, on the other, in pustula hemorrhagica vera and in septicæmia the temperature may be normal or subnormal. We may admit that inflammation exists without germic poisoning, and



if we could obtain a copious flow of pus without any germs, it is clear that the temperature would be not improbably disturbed, probably raised, by the increased metabolism imposed on the liver.

In spite of this difficulty, it may be worth while to pause over the undoubted fact that the severity of an attack of typhoid fever is in general proportionate to the extent of bowel lesion. (This is our experience, and it is so stated in Ziemssen.)

The view which Liebermeister adopts about the bowel lesions, and which is now widely accepted, is that they are inoculation marks of the disease. It may be doubted, however, whether the older view that it is the typhoid eruption proper be not the correct one. In smallpox we may imagine that what happens is that germic matter gets into the system and is carried round with the circulation to the skin, where it gets allocated in various spots, having for that structure a particular affinity. There colonies spring up. If we grant this in smallpox, there is no reason why precisely the same thing should not happen in typhoid. We must in any case suppose a particular affinity of part of the bowel for the typhoid virus. Now, the greater part of the circulating fluid passes into the bowel and back into the circulation many times a day.

Supposing, now, a portion of liquid containing typhoid virus swallowed. In the first place, the chances are that it will get insorbed, virus and all, before it reaches Peyer's patches and the big gut. In the second place, having been so insorbed, it will be exuded again into the bowel, and so have the same chance of inoculating Peyer's patches as if it had reached them directly. In the third place, the enormous multiplicity of the lesions in certain cases rather favours the view we contend for. In the fourth place, in those cases where typhoid has seemed to be conveyed by aerial infection it has not assumed the mildest form, as we should have expected it to do on the inoculative hypothesis. Thus, without refusing to the affection of the Peyer's patches and solitary follicles the name of inoculation, we think it is inoculative only in the same sense as the smallpox eruption is in all cases inoculative.

The course of an ordinary inoculated smallpox pustule seems to favour this idea of inoculation in the larger sense. In that case the initial fever of smallpox would be explained by the products of the germs being at that stage discharged into the blood. At a later period the fever chart is that of the dermatitis in most instances, and suggests that the germs and their products are retained in the skin by some arrangement or molecular affinity.

Applying the parallel to typhoid, we might suppose that the first week, marked by headache, malaise, and, in certain cases, bleeding at the nose, marks out a similar inward discharge of the products of the organism, while, at least in cases not very severe, the subsequent fever chart is that of the folliculitis.

We shall scarce hesitate to admit that this may be so when we



consider the enormous amount of lymph-structure thrown into active change. With the throwing off of the diseased follicles and the coetaneous diminution in size of the spleen the fever abates and gradually passes away. In its terminal part the temperature chart is that of a large healing surface. Certain prolongations of the fever are to be regarded as septic.

The course of the symptoms would be more easily explained by assuming that the skin in smallpox and the follicles in typhoid exercise their elective functions shortly before the eruption, while previous to that time and during its development changes the organism finds a home in the circulating fluid; nor is there any conclusive argument against this supposition.

8. *Some Remarks on Treatment.*—(1.) Dr Walker wishes to call attention to the value in typhoid fever of peptonized foods, especially in the severest cases or where there is great anorexia or vomiting. The energy of the economy is thus conserved to cope with the disease. He finds that salicylate of soda is probably of some value in the later stages of the fever. It should not be given, however, in depressing doses, or, if given in large doses, should be conjoined with alcoholic stimulants.

(2.) One of the most important adjuvants to treatment is the clinical thermometer. To the majority of medical men this will seem a platitude, and to all it ought to. It is only by a constant use of the thermometer that we are enabled early to recognise the existence of a mild attack of typhoid, and, by putting the patient to bed, etc., prevent the attack from not improbably becoming a severe one. It is mainly to this cause that we ascribe our small mortality, about five per cent., and it should be observed that the extremely mild cases not put to bed, which we alluded to in a previous part of the paper, are not included in our estimate.

(3.) Of the great value of alcoholic stimulants there can be little doubt, and in this connexion we would point to the experiments of Thudichum and Duprè. They found that a typhus fever patient could take about three times as much alcohol without the appearance of any in the urine as a person in health could. It is worth pausing over the granular condition of the liver occurring in typhoid, and described as a morbid appearance, in the light of this fact. We should regard it as in all probability a physiological condition and indicative of increased metabolism.

Having regard to the great weakness and frequent irregularity of the pulse at the end of a case of typhoid, and it may be quite early, to the fact that when patients first get out of bed the pulse tends to become rapid, to the increased power of the liver to dispose of alcohol, and to the undoubted power of alcohol in maintaining the action of the heart, we would advise the use of alcoholic stimulants in all except mild cases. They should be administered not in large quantities at a time, but frequently, so as to avoid flushing the bowels. Of course, sleep, except under very critical

circumstances, should not be interrupted. During the time that Mr Niven was at the Deptford Hospital a young man in the third week of the disease was apparently dying. His breathing had to all appearance ceased, there was no pulse at the wrist, the skin was becoming cold, the eyes were glazed and turned up, only the heart beat feebly. He had been taking 24 oz. of old port in the 24 hours. It was determined that a last attempt should be made to keep him in life, and two bottles of champagne were ordered in the 24 hours, some to be poured down his throat at once. The result was his recovery, gradual but steady. Now Dr MacCombie and Mr Niven agreed that the man was on the brink of the other world and slipping over. It is rarely one's good fortune to witness such a distinct saving of life as the result of medical agency.

(4.) A long continuance of high temperature has a disastrous effect on the system, from whatever cause it arises, and not improbably, while destroying the vital organs, more especially the heart and liver, fosters the parasite. Murchison was disinclined to put great weight on this, considering how often patients recover in relapsing fever, even in some cases after a temperature of 107° to 110° F. But in these cases this temperature was not sustained, and the fever itself was not of very long duration. Claude Bernard's experiments on dogs go to show that high temperature alone is sufficient to cause death, and indicate a reduction of temperature as a proper mode of treatment.

Liebermeister gives as his opinion that death in uncomplicated cases of typhoid is always to be traced to high temperature producing paralysis of the brain or paralysis of the heart.

The statistics of mortality given by Jürgensen and himself under strict antipyretic treatment are so favourable, making every possible deduction, that we can scarce doubt it to be our duty to try this mode of treatment in appropriate cases. The results at the London Fever Hospital seem to point the same way. Contra-indications are a very weak pulse, and, still more, hæmorrhage from the bowel. Peritonitis is an absolute bar. The contra-indications, of course, diminish the value of statistics not including deaths in the contra-indicated cases. We prefer the graduated bath. Alcohol and quinine are also antipyretics.

9. *The Newton Heath Outbreak.*—On 4th November 1882 Dr Walker wrote to the secretary to the Newton Heath Local Board, stating that he had 17 cases of typhoid fever under his care, requesting an investigation, and pointing to the probability of milk being the vehicle by which fever had been imported. The medical officer of health accordingly made an investigation with all due care, and besides Dr Walker's cases he collected others. Of the whole number he came to the conclusion that only 6 were undoubted cases of typhoid. Moreover at the meeting of the board Dr Walker's communication was alluded to as a scare.



On 17th November Dr Walker requested Mr Niven to see his cases, which now amounted to about 30. There was little difficulty, especially as careful notes had been taken, in recognising that they were all cases of typhoid. This fact was communicated to the papers, and the local board thought it necessary to have a further investigation. They accordingly requested Dr Tomkins, medical superintendent of the Monsall Fever Hospital, to inquire into the outbreak.

Dr Walker demurred to this appointment, however, on the ground that he wished gentlemen of eminence in the profession to examine the cases and sanitary condition of the district. He suggested Professor Ransome and Professor Dreschfeld.

On 4th December Mr Niven stated in a letter to the papers certain facts indicating a defective sanitary condition of the district, and again insisted on milk being the main vehicle of contagion. Instructions were given to the people, based on a general review of the facts. These were, to boil all milk used, to disinfect all bed-pans, water-closets, and privies, to cleanse at once linen soiled by the sick, and to boil their drinking water. The last precaution was for the sake of thoroughness. The drinking water was never suspected. It was also insisted on that sanitary defects should be examined into and repaired.

On 14th December Dr Tomkins's report appeared, exonerating the milk, and ascribing the outbreak to emanations from an open sewer which we had pointed to as a possible auxiliary on 4th December. These emanations were supposed to have been blown in a certain direction by a prevailing wind. His investigation was necessarily defective, in so far as he saw the cases of other practitioners, but not those of Dr Walker, except 9 which were shown him as an act of courtesy to the board.

We had requested either the gentlemen above named or some one appointed by the Local Government Board. The Newton Heath authorities ultimately requested assistance from the Local Government Board, who did not intervene, and there public discussion came to an end. Our investigation into the etiology of the outbreak was necessarily swift, and was intended to serve merely as a preliminary. It would seem, however, to have been correct.

Our action requires no justification. It is sufficient to point out that for the sake of the community Dr Walker staked his professional reputation at the very commencement of the outbreak, and placed his clientele under the eyes of a rival in practice. He had, therefore, a voice in who should finally decide. The mortality ultimately acted as umpire.

Dr Tomkins has stated that the surrounding practitioners, except Dr Walker, showed him all their cases, and that he saw 55 typhoid patients. Subtracting the 9 which we showed him leaves 46. It has been published in the papers that 30 deaths have



occurred in that district from typhoid. We were told in discussion at the Manchester Medical Society that this was a misstatement, and that the number was really 23 registered from that cause. Accepting this to save time, subtract Dr Walker's 5, we get 18 deaths to 46 patients, or about 39 per cent. Our mortality is 5 per cent. It has always to be recollected that hospital typhoid is not that seen in general practice. Many mild cases are not sent into hospital, as every one knows (*see* Bristowe). Ten per cent. is a high mortality for all cases of general practice. This would give 230 cases over all, giving the outside the benefit of our lower mortality. Subtracting our 100 cases leaves 130 to account for. It is no trifling matter for typhoid to become endemic in a populous district to this extent.

Dr Walker's house stands on the right-hand side of Oldham Road, on the way from Manchester to Oldham. His cases were scattered over about a mile of Oldham Road. At about  $\frac{1}{2}$  of a mile from his house, and nearer Oldham, is a side street called Ten Acres Lane, going from the main road to a large mill, Ten Acres Mill. This lane is traversed by a drain which enters the main sewer in Oldham Road. The drain was opened about the middle of September, and remained open till the first week in November. It was found that the end of the drain where it debouched into the main sewer was on a higher level than other parts of its course. During the time that it remained open the smell was sometimes very bad in its vicinity.

About 20th November, after heavy rains, the cellars in Grimshaw Lane, about the same distance from Dr Walker's house, but nearer Manchester, became flooded by regurgitation. After the subsidence of the fluid a sediment was left whose smell was terrible, and when a connexion was made with the main drain there, the main drain was half full of sediment. The smells in Dr Walker's house and in the next house, occupied by a clergyman, also in various other houses in the vicinity, are sometimes almost insufferable.

Twenty cases of typhoid fever have occurred in or close to Ten Acres Lane. The fever has also visited Grimshaw Lane.

There is sufficient here to arouse suspicion and stimulate careful inquiry. We do not think, however, that under any circumstances we could accept the idea that the typhoid virus grew in the open drain in Ten Acres Lane, and then, rising to the level ground, got blown all over the neighbourhood. Besides the inherent improbability of such a view, there is the fact that a number of cases, even of the early cases, occurred at a long distance from this side drain, as well in directions quite away from the prevailing wind as in the direction of that wind. It has been recently said that, without our insisting on this particular mode of conveyance, there is no reason why typhoid should not have been contracted by people passing this drain. But there is the greatest possible

reason for objecting to this supposition. It is almost quite inconceivable that the widely-scattered patients, a large proportion of them young people, should have within a recent period passed along this side street. Moreover, we should expect that the incidence of fever would have been particularly heavy on the mill-girls who had to pass the drain twice a day. Such, so far as we know, and we should know, is the reverse of the fact.

Twelve out of Dr Walker's first sixteen patients obtained their milk from one man, two of them from retail shops, two from other milkmen. When his cases amounted to 43, we found that 66 per cent. were supplied by this man. The proportion of people supplied by this man may be estimated at  $\frac{1}{10}$  of the inhabitants in the infected district. Out of 33 houses in which Dr Tomkins found typhoid fever, 12 were supplied by this man entirely. The proportion of cases we do not know. It was not improbably greater than this.

These figures, we submit, represent a very strong probability that the particular milk supply alluded to conveyed the fever. The probability is increased by some considerations about milk. Take an infected milk supply. It is sold to retail shops, and thus spreads the disease. Milkmen, when their supply is out, assist each other on the street. The field of operations of the infected milk is thus widened. People are fickle about their milk, and try another supply just for a change, it may be the infected milk. A person who has taken in the infected milk gives some of it to a neighbour whose milk has run short. In fact, in many ways it is clear that figures such as we have given have their significance greatly increased by a consideration of the conditions of the people. A notable fact about milk is the rapidity with which its quality improves when any complaint is made about it.

Other facts about the particular milk supply we have spoken of are these. In one street a long way off from Ten Acres Lane 12 out of 14 cases used this milk regularly. Out of the 20 cases round the drain itself 14 had this milk, etc., etc.

In discussion at the Medical Society it was objected that the milk supplied to the inhabitants was essentially the same as that supplied to another district where there is no typhoid; also that at the farm itself no typhoid had occurred, and, therefore, whatever probability was supplied by our figures, our case must fall through. The milk, however, we find, was not essentially the same, far from it.

The milk-pails which conveyed the suspected milk to Newton Heath were conveyed at night, we are told, to the milkman's place at another part of Manchester and there washed. Round this place were a number of typhoid patients about the commencement of the outbreak at Newton Heath. Moreover, we are informed that the farm supply has from time to time to be supplemented by milk from local dealers. We have therefore every



confidence in the conclusion we came to after a necessarily incomplete but not inconsiderate review of facts. We could wish, however, that a more thorough sifting of the facts and an examination of the sanitary condition of the district had been made. It is possible, but we hope not probable, that the course of events may yet necessitate a searching inquiry by the highest authorities.

## V.—NEW BIVALVE SPECULUM.

By W. L. REID, M.D., Physician to the Dispensary for Women,  
Western Infirmary, Glasgow.

THREE years ago, in everyday gynecological work, I began to feel the want of something new in the shape of a speculum.

I had in ordinary use a Sims, a Cusco, five or six Fergusons, and a Boseman. The first requires the constant presence of an assistant; the second is too narrow at the vulvar end to permit of anything more than the most limited manipulation; the third is troublesome, and painful in the introduction, and gives but limited space; the fourth is complicated, unhandy in use, and very difficult to keep thoroughly clean.

In seeking to find an instrument more suited to my work, I began with the idea of two blades united by a spring which would separate them after introduction, and which would be so bent laterally as to be itself out of the way of the operator. Such an instrument I now show you. It had to be put aside because the uterine ends of the blades could not be got to diverge sufficiently.

My next attempt was more successful. Two blades were made to separate by slipping them along a crescent-shaped bar (Fig.



FIG. 1.

W.L.R.

1). This caused the uterine extremities to diverge more widely than the vulvar, and so one cardinal point was gained. Again, I discovered that no screws were necessary to fix the blades at any special point on the bar; the upper parts were pressed inwards by the elasticity of the vagina, and the blades locked on the bar by the leverage thus produced. This was another step in advance. But I often met with vaginæ in which I could not thoroughly dilate the upper part because the inlet was narrow. I then made this third form, in which the blades moved, as before, on a bar, but the latter was jointed at the middle, and had two legs and a steel ring, so that the upper and lower ends of the blades could be separately and independently moved and afterwards fixed in any given position. This answered very fairly, and was



used for some months. Lastly came the form I now show you (Figs. 2 and 3), which differs mainly from its predecessor in being more elegant and in having the legs bent downwards, so as to allow the operator full advantage of the lumen of the instrument. There are only other two specula that I know of, the blades of which open independently above and below. These are the instruments suggested by Goodell (*Lessons on Gynecology*, p. 27), by Mundé (*Minor Surgical Gynecology*, p. 84), and I submit that both of these are much more complicated than the one I now show. After its constant use for eighteen months by students, assistants, and by myself, I have seen no further reason for changing its form, and I therefore now beg to recom-

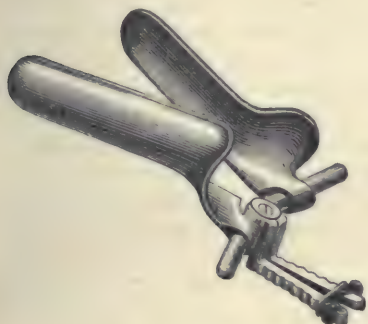


FIG. 3.



FIG. 2.

WLR

mend it to you. The following are the advantages to which I think it may fairly lay more or less decided claim:—

I. *Efficiency.* By opening widely both at the vulvar and uterine extremities, the blades give a good view, not only of the cervix, but also of a considerable portion of the fornices, and of the length of the vaginal wall. Unless unduly strained at its upper part, it does not interfere with the mobility of the cervix and fundus uteri.

II. *It is easily used.* The blades, when closed, are capable of being passed without difficulty into any vagina which it is usually necessary to examine by this method, and they require to be expanded only as far as its dilatability will permit.

III. *It is self-retaining.* When the blades are open the divergence is greater at the tips than at the bases, owing to the greater dilatability of the upper part of the vagina. This makes the instrument perfectly self-retaining; no assistant is required, and the operator's hands are left free for any necessary manipulation.

IV. *It is easily kept clean.* The blades slip off the bars (there are no open screws, in the threads of which dirt can gather); and as the whole instrument is of metal, it can be plunged into hot water, and so thoroughly purified.

V. *It suits any vagina.* With tubular and certain other specula one must carry a number of sizes in order to suit the instrument used to the case in hand. As the present instrument expands independently above and below, it adapts itself to any vagina, large or small, and whatever be the difference between the vulvar and uterine calibres.

VI. For the reason above mentioned it is possible, first, to strain the vulvar orifice as far as comfort will allow, and then independently open to its utmost the uterine portion. Thus *all available space is gained.*

VII. *It is very portable.* When the blades are placed alongside each other, the whole measures five inches, by one and a half, by three.

VIII. *It is durable.* Being all of metal, it is not easily broken. The upper parts of the blades are plated with gold, so that they resist not only ordinary applications, but even strong mineral acids.

IX. *It saves pain to the patient.* The upper and lower parts of the vagina being dilated independently, no more strain is put on either than can be comfortably borne, and its mere introduction with the blades closed gives no pain in ordinary circumstances.

X. *It saves time to the practitioner.* He has not to consider which size of instrument it is proper to use, nor try one and then feel obliged to set it aside for a smaller. It is applied so easily and rapidly as greatly to economize time.

XI. *It may be used in any position of the body.* The bars and legs project to such a slight extent as not to interfere with use in the dorsal, left lateral, or knee-elbow positions.

XII. The blades being comparatively short, when they are expanded *the cervix is brought down near the eye and finger of the observer*, and the canal of the cervix, by a little extra expansion of the tips, can be opened up for sight and treatment.

XIII. Lastly, owing to the vulvar orifice being widely open, *instruments* (such as the sound, Playfair's probe, volsella, dilators of various sorts, even Ellinger's parallel-bladed one) *may be used* with perfect freedom. Tents may be passed, or intra-uterine stems, and these seen in good position or secured by a tampon before the speculum is withdrawn.

I may add that this instrument is made by W. B. Hilliard & Sons, Cutlers, Glasgow.

## VI.—SURGICAL EXPERIENCES IN THE ZULU AND TRANSVAAL WARS, 1879 AND 1881.

By D. BLAIR BROWN, F.R.C.S. Edin., Army Medical Department.

(Continued from page 45.)

CASE III.—Lieut. H., of the 58th Regiment, was on the Majuba Hill, and there wounded in the right elbow. On the 29th of March he was placed under my care in the following condition :—

The bullet had entered the joint through the middle of the humeral condyle, passing obliquely and in a downward direction, and made its exit over the radial shaft anteriorly, quite 4 inches from bend of elbow. The joint was enormously swollen and full of pus, the whole forearm acutely inflamed, and the fingers immovable from adhesions. His temperature for some time past had been most alarming, generally  $105^{\circ}$  F. at night. It was thought that amputation was the only proceeding under the circumstances. On this date I placed him under chloroform, and, after a careful examination, proceeded to excise the joint, considering it offered a prospect of success. Owing to the large and complex nature of the injury, I made an H-shaped incision to get at the joint. The length of bone to be removed, and the swollen condition of the joint, necessitated such an incision; a single one would not have sufficed. The condyloid end of the humerus, except its outer ridge, was grooved by the bullet, and for 2 inches up the shaft the periosteum was wanting and the bone bare. The joint was distended with pus. The head of the ulna and its shaft for 3 inches down were comminuted and bare. Head of the radius was devoid of its cartilaginous covering, but the shaft was healthy. I removed the joint, together with the whole of the bare portions of the shafts of the bones.

*31st March.*—The temperature to-day was nearly normal. A little oozing and free discharge, especially from the wound at exit, took place. Swelling of arm subsiding.

*8th April.*—The edge of under flap sloughed and came away on a charcoal poultice which had been applied. A few fresh stitches were introduced, and the arm placed on a splint.

*10th April.*—Wound quite healthy now; upper portion of the incisions healed. Owing to the great stiffness of the fingers from adhesions, great pain is experienced on forcibly moving them. Such passive movements were very regularly employed, so much so that the transverse incision threatened to break asunder; extra care was taken in consequence. The arm required for some time to be kept extended, so as to relax the edges and keep them close.

*15th April.*—Temperature rose to-day, signs of an abscess forming at upper edge of wound. Poultices applied.

*18th April.*—The whole of the inner surface of arm was hard, painful, and inflamed up as far as the insertion of the deltoid. There was ample evidence that a subcutaneous collection of pus had formed. A free incision was made into this, and a large amount of creamy pus evacuated. The "excision" wounds went on healing nicely all this time; all the sutures now out.

*28th April.*—Another collection of pus formed, requiring similar surgical treatment. Drainage-tubes always used on those occasions. Temperature again normal.

*6th May.*—Suppuration all gone, and, except a small sinus at the



outer edge of the cicatrix, all the wound had healed. The arm was flexed with but little pain.

17th May.—Out of bed, with arm flexed in a sling.

19th May.—Out for a walk. Arm flexed and extended daily, though still considerably swollen.

23rd May.—Is now quite strong; commenced pulling at the weight arrangement in order to regain the use of the joints.

13th June.—As the elbow and fingers remain stiff, he was placed under chloroform, and I flexed the forearm without difficulty, so that the hand touched the chin, and extended it straight out. All the fingers were severally flexed and extended. Is now in excellent health.

18th June.—He left my care, proceeding *en route* to England.

27th March 1882.—I received a letter from Mr Lumley of North-allerton, the surgeon who attended this patient on his arrival at home. A letter from the patient accompanied it. The following account of the patient's subsequent surgical history will be read with profit:—"The small sinus was present on arrival in England, but he was able to hunt during the whole season. For the time after the operation I considered he had a fair amount of motion in the joint. The hand was cold and somewhat brawny and swollen, also the fingers; and owing, I should suppose, to some form of adhesive inflammation, the tendons, particularly the extensors of the fingers, appeared to be adherent, and, as it were, shortened, preventing any flexion of the fingers. The short muscles of the thumb had undergone a similar shortening. The sensations of the hands and fingers was perceptibly impaired, but not lost. I advised friction, moderate passive motion of the forearm and hand, galvanism, and constantly bandaging in flannel, and a warm glove to be worn. My patient nevertheless went in vigorously for hunting all the season, not, I may say, with my advice. In October of last year he saw Sir James Paget, who advised continuation of treatment above mentioned, suggesting a kind of galvanic battery, which was got. He had not made much progress during the winter. A few weeks ago he went up to town and saw Professor Lister, who removed a portion of bone, and advised that the fingers should be (under ether) forcibly flexed one by one. This I did on Friday last, breaking down without great difficulty all adhesions. I have opened the hand out every day since, and fully extended and flexed the fingers and thumb. No inflammation has followed the operation, and already he can flex better without help, and also extend the fingers more."

The patient himself says: "The hand, you must know, is the backward part, but I am afraid that is a good deal my own fault for not having it worked properly till just lately. The elbow is all right as far as moving it goes, and I can raise the hand up almost as far as my mouth. I have been able to do the 'light fantastic,' and found I could hold my partners fairly tight with



*Plate VIII.*







my bad arm, so that shows I have a good deal of strength in it, and I did that at Christmas. I have not let my arm interfere with my going about. Shooting was the only thing barred. I have been able to hunt very nearly as per usual. In that I have been frightfully lucky, as I have had several falls, but never once on my bad arm. It was rather through fear of stopping my hunting, etc., I had not my arm attended to sooner." The arm is most useful as it is, and conservative surgery has demonstrated that even in such an extensive injury an arm can be preserved. He is now at his duty with his regiment.

CASE IV.—Corporal W. C., of the King's Dragoon Guards, was hit when taking part in the small cavalry charge on to the Koppie at Lang's Neck. He came under my care on the 18th March, in the following condition:—The bullet had hit the ulnar shaft of the left elbow three inches from the coronoid process, passing obliquely upwards and outwards through the joint, making its exit posteriorly about the situation of the ulnar nerve at the inner condyle of the humerus. A large abscess full of pus was present on the inner side of the elbow; a probe passed freely into the joint, finding the articulation completely bare. The temperature at night was two degrees above the normal, and he implored for "something to be done, as he was in such pain." On the 1st April, so much of the bones being implicated, I made an H-shaped incision, and thus removed all the joint and injured bones. The head of the ulna was found in fragments, and for three inches down its shaft it was devoid of periosteum and required removal. The head of the radius was uncovered by cartilage, but unbroken; immediately below it, however, the shaft was found in fragments, quite a dozen being removed. A third part, therefore, of the bones of the forearm had to be removed. As regards the humerus, the inner condyle alone was injured. In order to compensate as far as possible for the absence of the large portions of the other bones, I removed just enough of the articular end of the humerus to include the portion usually covered with cartilage, which was gone. In order to get at the detached and bare portions of bone in the forearm, the under flap of the H-incision had to be enlarged, though the possibility of its after sloughing from want of arterial supply was kept in view. Considerable oozing took place for two days after the operation, and on the third a small slough was present at the upper edge of the under flap.

6th April.—The slough came away on a charcoal poultice. Several fresh stitches were introduced, and the edges again drawn together.

10th April.—The wounds were healing well, the inflammatory swelling all but gone, allowing passive movements to be commenced. The whole of the upper incisions having healed, the sutures from these were withdrawn.

*15th April.*—Arm easily flexed; wounds healing; sits up in bed, supporting his arm. A small wound at the inner side of the transverse wound is the only unhealed portion.

*17th April.*—Out of bed. Above hole filling up with granulations.

*20th April.*—Out of doors walking about. Arm hanging by his side, and patient moving it about himself without assistance.

*27th April.*—Quite healed. Commenced working a weight on a rope and pulley. Took to carrying cans of water, cleaning his cavalry equipment, including long boots, bits, and spurs. Very shortly nearly complete restoration of the motions of the joint was effected. He flexed and extended his arm to the fullest extent, and a considerable amount of pronation and supination was present. This man took his discharge from the service in Natal. I have seen this man perform his duties as servant at the dinner-table, also driving restive horses, as well as taking part in a sergeant's ball, in all of which he acquitted himself so thoroughly that, unless one knew what had been done to one arm, it would never have been remarked there was anything extraordinary present. The great difference in length of his two arms greatly puzzles his friends.

He has been good enough to have his photograph taken, holding a full-sized Martini-Henry rifle at the "present." This he does with perfect ease, and can keep it up in that position as long as most men. This patient has lately paid a visit to England, and is now back in Natal at his former employment.

This is scarcely the place to enter into the after-treatment of such excisions. From the practice of Professor Syme I learnt the value of early movement as soon as the incision would bear the slightest strain. The pulley and weight arrangement, which did so much good service, was very easily extemporized. One of the brass pulleys belonging to the fracture and dislocation apparatus box was fixed in a cross-beam in the roof of the hut. The ordinary rope belonging to it was inserted through it. At first a small stone enveloped in a handkerchief, and, as the case improved, a larger one, formed the weight. The patients soon got up a healthy rivalry amongst them, and for hours they would sit working this simple apparatus. The last case recorded shows that, though all the theoretic objections to the H-shaped incision hold good, in practice the most perfect results can be thus obtained. In the great majority of cases Mr Syme used to perform his excisions by the H-shaped incisions, and, being the father of conservative joint surgery, his practice rested on grounds as solid as his general results were perfect.

#### GUNSHOT INJURIES OF THE ARM AND FOREARM.

The day, I believe, has come for the more extensive adoption of the practice of resection for gunshot injuries to the shafts of



long bones. The experience of the Crimea, Indian Mutiny, and American wars was not in its favour, the cases thus treated almost invariably ending fatally. However, the use of counter-openings and drainage was not understood then as now, which entirely alters the case. I shall detail cases in which the immediate removal of the shattered fragments, and also where surgical interference of a more complex nature, was successfully practised.

CASE I.—No. 3160, Private R. B., of the 58th Regiment, received a wound at the Ingogo fight, in the right arm. The bullet entered its anterior surface  $2\frac{1}{2}$  inches above the wrist, and as there were no wounds of exit, it was concluded it had lodged. The probe found a sinus extending up almost to the external condyle of the humerus. It was a matter of some difficulty to make out the presence of the bullet, but when pressure was made in the centre of the arm  $2\frac{1}{2}$  inches below the elbow-joint, between the radius and ulna, the feelings of the patient led him to be sure that the bullet was there. An incision over this point revealed it. No bone was injured, and the case rapidly got well.

CASE II.—Colonel B., of the 58th Regiment, was standing in front of his men forming a portion of the celebrated square at Ulundi. The Zulus attacked this portion in great force, crawling up amongst long grass. Suddenly he felt a stinging sensation in his right forearm, for which he could not imagine a cause. Very shortly after, Major H. of the same corps called his attention to the fact that his arm was bleeding. The bullet had entered the upper part of his forearm anteriorly, and, penetrating, made its exit in the middle of the forearm posteriorly. The entrance wound was the size of a shilling, clean and regular; that of exit large and irregular. The whole of the ulnar shaft between the two wounds was smashed, and there was considerable hæmorrhage. I removed the whole of the broken bone, controlled the bleeding, dressed it in tenax, etc., and put on a splint. This officer made an excellent recovery, and two years after, when for six weeks sitting at the same mess-table together, I had the satisfaction of noticing the very slight diminution of power and use he suffered from after such a severe injury.

CASE III.—No. 2339, Private J. B., 94th Regiment, was shot, at Brunker's Spruit, in the arm and leg. He came under my care on the 23rd April 1881. His arm was in splints. On removing them the limb was found to be inflamed and very painful. A wound existed about the middle of the humeral shaft, and penetrating the limb in a direct line. On inserting a probe dead bone was felt, but the fragments were not movable. A considerable amount of lateral motion—false joint—existed, but the question was, whether union was being attempted and partially formed? The thigh had



a penetrating wound in it, the bullet entering at one side of the ham, and coming out, in the same line, on the other. The case being very slow in its progress, and having doubts as to the union which was supposed to be going on, he was placed under chloroform, for the purpose of diagnosis and treatment, on the 5th of May 1881. Three large sequestra were found in the arm and removed. There was no attempt at union, no sign of callus being thrown out. The limb was carefully bandaged in splints. From the wound in the thigh I removed a considerable portion of serge, the material his trousers were made of. This was very deep down amongst the muscles, and required a free incision to reach. As the wound had a history of healing up and constantly opening out afresh, I knew some foreign body had lodged. After this treatment the latter wound healed rapidly, and did not break out again.

A case of erysipelas appeared in the ward where this man was, and, being "chums," this man used to attend upon the other. He soon contracted the same affection, and had a struggle for life, so severe was the attack. On getting over this a fistulous opening still remained in his arm, and the movement at the seat of injury continued, so I determined once more to try operative surgery. On the 27th of June, under chloroform, I made a free incision down to the false joint, and found the shaft of the bone much injured; the lower end was grasped by two projecting pieces of the upper, and so nothing but impaction was present, neither fibrous, nor even an attempt at callous union. With a pair of forceps I snipped off these projections and broke the connexion, tilted out both ends, and with a chain saw made them even. There being no drill in the possession of the surgical armamentarium at the front, I made use of one extemporized by a sergeant in the Royal Engineers. After succeeding in putting one suture through, the boring end of the instrument broke in the shaft, and I was deprived of the means of keeping the ends together. I thereupon made a free drain, and put a Stromeier pad beneath the limb. After a few days of rise of temperature he was able to be out of bed. Again his active habits, and being of so much use to his "chums," were against him. Nothing would prevent him helping his less able fellow-sufferers. I had therefore to place the whole of both shoulders and the injured limb in plaster of Paris, and placing a smaller Stromeier pad in position as well. A window was cut anteriorly over the wound in the plaster, and also posteriorly at the opening, where the drainage was taking place.

*16th July.*—I took off the plaster to apply it fresh, and found the bones in excellent position, and no grating could be made out. The anterior wound was quite healed, and only a few drops of pus came away from the posterior one. The arm was put up in the same way as before. Walks about the whole day.

*19th July.*—Wounds quite healed. From this date, being detailed for other duties, I lost sight of him. On arrival in England, how-

ever, I learnt he was at Netley with a very firm fibrous union at the seat of injury ; and he writes to me to say that, with a support which has been supplied to him, he is able for most work. But for the want of a proper drill, this would have been a case where osseous union would have resulted.

CASE IV.—Corporal R. H., of the 3rd 60th Rifles, was hit at the engagement on the Ingogo heights. The bullet first struck the neck a little to the left of the trachea, passing across it without penetrating, and made its exit at the sterno-clavicular articulation. Again it entered at the bicipital groove in the right arm, as he was at the moment firing his rifle. The bullet passed through the shaft of the humerus and made its exit posteriorly about the middle of the arm. On the 18th of March, when placed under my care, I found the case in the following condition :—A very distinct fracture existed in the shaft of the humerus at the above situation, and mobility was great. The probe found a large amount of loose and bare bone. There was very profuse discharge of foul pus, and the patient was day and night moaning piteously, being in great agony. A very large abscess occupied the bicipital sheath, which I at once opened, and placed the arm in a suitable splint. A second wound of a non-penetrating nature was present over the inner condyle of the elbow on the same limb.

On the 30th March I amputated the limb at the shoulder-joint, and it was found that very little beyond the head of the bone had escaped injury. A little below the head the shaft of the humerus was found split into fragments. The smallest trace of callus was noticed forming on the edge of some of the larger sequestra. The surrounding tissues were greatly disorganized. The lower portion had two processes of bone, one at either side, with a deep depression between them. A large sequestrum lay between the fractured ends. The case was dressed in the usual manner.

8th April.—Three ligatures, the tubes, and sutures were removed, the stump being almost healed. Continues to moan, and fancies he is suffering from the old pain, and that his arm is still on, though he knows it is not.

13th April.—The stump is quite healed, and all tubes, etc., away. The operation was performed with the flaps of Larrey, as already recommended. This man is now in England, employed in the Corps Commissionaires ; and I lately heard from him, saying he was in excellent health, doing well, and lately married. In such a case as this, if I ever get an opportunity of performing resection sufficiently early after the receipt of the injury, I most certainly shall adopt that course. Even a limb with strong fibrous union is preferable to its complete loss, which in such conditions as these is the only alternative.



## GUNSHOT WOUNDS OF THE HAND AND WRIST.

Cases of accidental injury to the hand, in the progress of campaigns, either when performing the duties of night piquet or before the enemy, are by no means rare. On several such occasions I have seen fingers torn or completely severed by a rifle being accidentally discharged either into the owner's limb or into that of a comrade. On one occasion, at the battle of Ulundi, my attention was directed to a severe case by the Sanitary Officer to the Forces. There had been a lull in the firing, and the soldier was resting on his rifle, the hand being upon the muzzle. Something must have touched the trigger, as the weapon went off and made a great hole in the hand. Notwithstanding this I felt sure that immediate removal of all the injured bones, etc., would result in a serviceable limb. This I there and then did, afterwards effectually controlling the severe hæmorrhage which naturally was present. This case, I afterwards learnt, made rapid progress; and though all the fingers were not of use, the majority were, and the hand was most serviceable.

Simple cases of taking off fingers I shall not allude to here, as in all such instances the injury had done most of the operation, and a pair of scissors generally did the rest. Conservative surgery, in such cases, has the most remarkable results.

There have been numerous cases recorded of the removal of one or two bones of the carpus after gunshot injuries such as occur as above described, but total excision of them as well as the joint, with articular ends of ulna and radius, are rare. According to no less an authority than Professor Longmore, the following case is the only one performed for gunshot injury on record in the annals of British army surgery.

CASE.—Captain H., of the 92nd Highlanders, after a very important and conspicuously gallant morning's work on the Majuba Hill, was hit in his left wrist during the surprise which subsequently took place. On the 2nd April I was asked to give my opinion on his case, which resulted in his being placed under my care the following day for operation. The bullet entered the joint at the styloid process of the ulna, passing obliquely upwards, and making its exit between the bones anteriorly about an inch above their articular ends. A probe passed freely into the joint, and a large quantity of bare bone and some loose portions were found. The joint was filled with very foul-smelling pus. The temperature every night was above 102° F., and he was suffering acute pain. Assisted by Brigade-Surgeon Roe, C.B., Surgeons-Major J. Scott and J. Scanlan, I performed the operation of excision of the wrist in strict conformity with the rules laid down so clearly by the illustrious surgeon whose genius solved the difficulty—Professor Lister. The details of



the operation are so complicated,—in fact, it might reasonably be called a dissection,—that I shall not attempt to describe what I did, further than to record the nature of the injury and the results of prolonged suppuration present. No tendon but those laid down as necessary were cut; every bone of the carpus was removed except the pisiform, which had its cartilaginous side pared; the ends of every metacarpal bone, and those of the ulna and radius, were removed. The bullet had broken the articular ends of the radius and ulna, and they were found in fragments; a large one lay between the two shafts. The shaft of the radius for 3 inches up was in a like condition, in pieces. From prolonged soaking in pus, and extension of the inflammatory process, internal caries of the bones of the carpus had taken place, and the first row were found very soft, breaking away easily in the forceps. The articular end of the ulna was intact, and in order to compensate for the destruction of so much of the radius I removed merely the cartilaginous end of this bone. Three small arteries were tied. Previous to operation an attempt—under chloroform—was made to flex the fingers. Owing to the long continuance of the inflammation, and the presence of so much adhesive lymph being thrown out, the greatest force was required to do so. In stitching up the incisions it was found impossible, from the œdema which set in, to get the lips together. Deep double sutures were introduced, and gradually tightened as the swelling subsided. Considerable oozing took place, and in the evening the fingers were quite livid and cold, and I fully expected to be called during the night to amputate the arm. However, the careful application of heat assisted in the return of the circulation to the hand, the arrest of which, we knew, was due to the great swelling of the tissues.

*4th April.*—Lividity greatly lessened. Oozing still continues. A water-drip extemporized.

*6th April.*—The œdema going down; lips of wound pulled closer together in consequence. Some of the lower stitches had loosened owing to the subsidence of the swelling, requiring new ones to be introduced.

*8th April.*—Looking very much better. Wounds quite close, and the suppuration free through the drainage-tubes.

*10th.*—Two-thirds of upper incision healing by first intention. Temperature almost normal. Appetite better.

*13th.*—Shortened drainage-tubes. All the ligatures now away. Took out several of the sutures. Upper wound healed. Lower one still gapes, but edges less swollen. Withdrew the drainage-tubes.

*17th.*—Wounds being now nearly united, all the sutures were taken out. Fingers still very stiff, requiring considerable force to move them.

*19th.*—Attacked by a severe form of ague. This officer was

invalided from Afghanistan only a few months previously for that fever, from which he had suffered most severely, and nothing but the glory of being again actively engaged with his regiment would have taken him from England while on sick leave. Quinine, etc., were duly administered. This feverish attack continued, more or less, until the 28th April. During all this time, however, the hand went on improving, only a little sinus being present at the upper corner of the lower incision, from which slight discharge came. Gets up now, and dresses, for most of the day.

*1st May.*—To-day he went outside for a walk. The fingers are regularly worked, though it causes considerable pain. His servant, Private Smith, one of the finest types of Highlanders, is a most zealous “worker of his fingers,” taking a great interest in the future use of the limb.

*7th May.*—Having now got over his fever, and his health being greatly improved, as the fingers were still too firmly bound down by adhesions, I placed him under chloroform and forcibly flexed and extended them to their full limits. The wrist-joint was now found fairly formed and able to support the hand when the splint was taken off. The appearance now “is like a hand.”

*18th May.*—Regular movements of the fingers being practised, health improved, and everything healed, he was sent off by convoy *en route* to England to-day.

The splint which I used for this case was made in accordance with the instructions of Professor Lister. I got two ordinary forearm fenestrated zinc splints, of which there were a large number in the stores, and by means of a soda-water bottle wire I secured them together so as to form a long one, which extended from the tips of the fingers to beyond the olecranon. On one end of this I placed a cork, two glued together, of large size, out of ointment jars, and then cut them into the desired shape. I then fixed them by boring holes through them and passing similar wires through and securing all to the fenestrated zinc splint in a similar way. The other end of the splint had a hole made in it in order to take off pressure from the prominence of the humeral condyles, which became painful and showed a tendency to ulcerate. As the joint became formed the anterior part of the splint and the cork elevation were lessened, so as to allow of more extensive passive movements.

The following account is from the patient's pen, which he sent me on my arrival in England. It is dated the 26th March 1882:—“I got through the joltings of my journey down to Durban very well. The hand swelled up after a long trek—journey—but quickly got right again after a few hours' rest. On board ship I made a great improvement, and began to be able distinctly to move my fingers. When I got home I went to see Mr Lister. . . . He broke down a good many adhesions in the fingers, causing me the most horrid pain. My servant also worked the fingers twice



a day. About a month after I came home, by Mr Lister's advice I had a cast made of my arm and hand, and then a light copper splint, exactly fitting the lower half of my arm and fitting up into the palm of the hand. It was covered with leather and laced tightly up. It extends from the knuckles to within about three inches of the elbow. I used to see Mr Lister about once a fortnight, and was repeatedly 'broken down' by him, the last time under chloroform. The hand has every night to have a flat piece of wood bandaged along the back of the arm and projecting over the fingers. These have then a small square piece of wood put under them, and are strapped up to the flat piece of wood. This has done much good in keeping them straight. All this time my hand has steadily been gaining strength. I can straighten the fingers nearly quite out, and the first and second joints bend in well. The knuckles, however, are pretty stiff. I can lift five or six pounds between my fingers, and (with my splint on) I use a fork, but can't bend wrist sufficiently round to put anything in my mouth. I always carry my stick or umbrella in my left hand, and can dress myself entirely, with the exception of tying my necktie. Mr Lister says I shall go on improving for a long time to come."

Shortly before this officer left to take up his appointment in India I saw him walking down the Haymarket with his umbrella in his hand, which he held in a free manner. Being in a cab, hurrying to catch a train, I missed the opportunity of examining it. If such a success follows so severe and complex an injury of these parts, what must similar treatment effect when resorted to early, and when large portions of the shafts of either bones of the forearms are not injured? It certainly is one of the most melancholy sights to see a stump, the result of amputation for injuries to the wrist, hand, or forearm.

In all cases of surgical interference I have undertaken for gunshot injuries of the upper extremity it has been my fortune not to have lost a single case. Under such circumstances I am quite satisfied with my dressings.

#### GUNSHOT INJURIES OF THE HIP AND KNEE.

Very few cases of gunshot injuries to the hip came under my observation. The following was the only one I made notes of:—

CASE I.—No. 1105, Private E. G., of the 58th Regiment, was struck, on the top of the Majuba Hill, near the great trochanter of the femur. There was no wound of exit. The probe passed downwards and backwards behind the bone and towards the perinæum. On the 13th of April the bullet was extracted, being found 3 inches below the gluteal fold amongst the hamstring muscles.

With regard to the method of treatment of penetrating gunshot injuries of the knee-joint there appear to be conflicting opinions



held by our first authorities. Every case in which expectant or conservative surgery (that is, excision) was practised in the Crimea proved fatal. The wonderful results of Dr Reyher in the Russo-Turkish war, where he treated eighteen penetrating wounds of the knee antiseptically,—that is, with spray and gauze,—have startled the surgical world. Three deaths only took place amongst these cases, while the remaining fifteen not only recovered, but had mobility in their joints! Such results have certainly never been attained by any other surgeon. Almost as startling is the following evidence taken from Mr Cheyne's great work on antiseptic surgery. He says, "Excision of joints is now rarely performed, for with aseptic treatment an incision into a joint and the insertion of a drainage-tube is generally sufficient in cases where formerly excision, or even amputation, would have been required." When this comes to be recognised I shall at once fall in with it, but the demonstrations I have witnessed by its supporters fall very far short of the conditions met with in gunshot injuries. I was present in Edinburgh when Professor Lister performed on a man a serious operation to cure a ruptured tendon of the quadriceps femoris. During the operation he made incisions which laid the knee-joint open. This had rarely been attempted before, and was followed by no bad result. It is quite a different thing to make such a clean incision, and for a bullet to traverse the same joint. If one remembers the furrowing of the bones, the most certainly present bony *débris*, the complete entrance of air with all its germs, it will be seen the cases are not parallel. But we have Dr Reyher's cases. True, but then I have seen not a few cases of wounds of the knee-joint diagnosed as penetrating in which recovery took place without any but the very simplest treatment, and were, in the opinion of others beside myself, not cases of penetration at all. It must not be forgotten, now we are living in the epoch of conoidal bullets flying at great velocities, that they very frequently pass in the neighbourhood of joints, as we have seen in the shoulder, but more frequently in the knee, without penetrating them. Let it be remembered how the knee is encircled by strong ligaments, and possesses a powerful tendon as well as a bony shield. The chances of such bullets being deflected from their line of flight is considerable, though theoretically scarcely what we should have expected in the case of conoidal bullets. Diagnosis of the most complete nature ought to be made at all hazards in cases of gunshot injuries to the knee, if the view I take of such injuries be the correct one, while if the other is adopted no such diagnosis is required. It is, at the best, conjecture, if the very erroneous evidence that presented to the sight of the observer as to the supposed course taken by the projectile, gathered from inspection of the joint and the situation of wound of entrance and exit, be the only physical sign made out. There is a practice followed on some occasions after an engagement of placing what is called a "diagnosis ticket" on the

injured soldier. This is an excellent custom, but can be carried too far. I have seen cases of the most trivial natures and most apparent conditions so labelled. This is done by some as a red-tape duty, which the spirit of the regulations does not expect, and takes up precious time. In cases of gunshot penetrations of the knee, such a ticket would be of the greatest value if a complete diagnosis as to the perforation and amount of injury be duly appended by the surgeon under whose care the case first falls. In my future practice, if ever placed in charge of such injuries early enough after an engagement, I shall be desirous to freely open knee-joints that have been penetrated, so as to remove all foreign matter and *débris* of bone, and introduce a suitable tube for drainage, apply ice and splints and the usual constitutional means to combat inflammatory action, and expect by these means to save both life and limb, though possibly with a stiff joint. Before the days of drainage as applied as at present to wounds, the practice of the Peninsular, Crimean, and American wars all confirmed Dupuytren's statement, that by trying to save such limbs "we lost more lives than we saved limbs," and amputation was the safest treatment to pursue.

The following cases will illustrate the different conditions met with after gunshot injuries to the knee:—

CASE II.—A wounded Zulu, captured by Captain B. of the contingent at Ulundi, was seen by me on the field. The bullet had entered at the outer side of the patella and went right through the knee-joint, escaping in the popliteal space. I pushed the tip of my little finger into the joint and felt the articular cartilage. I reported the case to my chief, who gave me permission to operate. Circumstances occurred which prevented this, and he accompanied the convoy of wounded to Ladismith base hospital, nearly 200 miles distant, where he arrived in such a condition that immediate amputation was resorted to, and he died.

CASE III.—Another case in a Zulu wounded at Ulundi came under my observation. For two months I was detained in Zululand after the war, and saw many of our former enemies come in to our camp, to get the written passes to enable them to return to their homes. Not a few of them were wounded. The number of simple penetrations of muscles was remarkable. I found one with the most distinct marks of a gunshot wound of the knee, which any one would have said, from the line of flight the bullet must have taken and from the situation of wounds of entrance and exit, must have penetrated the joint. The bullet hit the inner border of the patella, grooving it distinctly, and made its exit posteriorly half an inch internally to the tendons forming the outer upper margin of the popliteal space. A month after the injury it was completely healed, the joint being perfectly mobile, without the aid of surgery. Through an interpreter he told me all about the progress of healing and the means adopted to get it well. There is a small flat-leaved



orchid which grows very plentifully on the Veldt. A leaf of this was secured on both wounds and changed occasionally: this was all that was done. A piece of oil-silk would have answered the same purpose and been followed by the same result.

CASE IV.—Private S. T., of the 94th Regiment, was hit in the left knee at Bruner's Spruit. The bullet entered at the tibial side of the apex of the patella, and made its exit over the popliteal vessels, in the middle line of the space. No inflammation nor evidence of bony *débris* followed. The wound healed by first intention, leaving the movements of the joint unimpaired.

What was the nature of such injuries? I do not believe they touched the joint at all, however much they appear to have done so when looking at them. In the Franco-German war such cases of periarticular injuries caused not a little remark. Unless such a thing be remembered as possible, the most misleading opinions may be formed. The following case was almost moribund when I saw it, so amputation was imperative:—

CASE V.—No. 3472, Private H. B., of the 3rd 60th Regiment, was wounded at the fight on the Ingogo Heights. On the 18th March he came under my care, when I found the knee enormously swollen and painful, a profuse discharge of pus coming from the joint, which was being poulticed. The patient was suffering from severe diarrhoea, red glazed tongue, high temperature, and other signs of hectic fever. The bullet had entered at the outer upper margin of the popliteal space, traversing the joint, and splitting the articular surfaces of the tibia and fibula, and made its exit at the inner side of the joint, through the head of the gastrocnemius muscle, a very wide track. I had the limb suspended in a swing, and freedom was given to the pent-up discharge in the joint. The bullet, which had penetrated the knee, had lodged in the opposite ankle, from which I removed it.

23rd March.—I amputated the limb at the lower third of the femur. I intended to have performed Mr Carden's operation through the cancellated tissues of the articular end, but on reflecting the long anterior flap a large abscess existed, running up from the outer condyle of the femur amongst the muscles of the thigh, the shaft of the bone forming its inner side, and which was filled with fetid pus. The periosteum was found quite off the articular and lower portion of the femur, and for this reason the severance had to be made higher up the shaft than expected. Besides the ordinary drainage-tubes, I placed one in the abscess sac itself and made a counter-opening in it, so that, should pus secrete, a free drain would exist and thus save the flaps from any deleterious influence that might ensue if such matter got amongst them. The bullet was found to have tunnelled through the articular end of the fibula and the outer articular facet of the tibia,





*Plate VII.*



and a well-marked groove was present on the outer condyle of the femur. The smashing of the tibia extended down its outer side as far as the anterior tuberosity. The outer condyloid articular surface was split. The whole of the joint was full of bony *débris*, some pieces of considerable size. There was not a vestige of articular cartilage left in the joint.

*25th March.*—The diarrhœa began to ameliorate and the tongue to become a little moist, and from the very low condition he was in he has become quite cheerful.

*30th March.*—The wounds are healing rapidly. The discharge only comes through the drainage-tubes. Patient held his own stump up while being dressed. Abscess draining nicely, very little discharge coming from it now. The usual oil-silk and tenax dressing were used throughout.

*2nd April.*—Stitches, ligatures, and drainage-tubes removed to-day; wounds healing very quickly.

*7th April.*—Stump quite healed. The diarrhœa, however, showed itself again. Ordered astringents.

*9th April.*—Diarrhœa gone. This patient was sent shortly after this to England. When I got home I saw this man in March 1882, and found he had become so stout and muscular that I would scarcely have recognised him. He had an excellent stump, which was fitted with a cork leg, and he could walk with the greatest comfort. The bullet which produced this injury was one of our own Martini-Henry ones, and had the broad arrow mark most distinctly on its base.

#### GUNSHOT INJURIES OF THE ANKLE AND FOOT.

So long as the posterior tibial vessels are not included in a gunshot injury to the ankle, some hopes may with reason be entertained of saving the foot. It is remarkable the number of such injuries which are met with in modern warfare. In the majority of cases the bullets which hit this joint or the foot have had their velocity lessened and their shape altered by hitting some stone or other object first.

While it is hardly possible to conceive a cylindrico-conoidal bullet passing through a knee-joint and setting up so little irritation that the joint does not become filled with pus and acutely inflamed, yet this can most certainly happen in the case of the ankle. In no other joint in the body is the practice of waiting, expectant surgery more frequently rewarded as in this one. Partial operations, such as the removal of one or more bones of the foot, are done with advantage, though this can be carried too far, especially in otherwise complicated cases.

**CASE I.**—Mr F. S., a non-commissioned officer in the Native Contingent Corps, a native of Switzerland, while in a most gallant manner—for which personal bravery he was awarded the Victoria

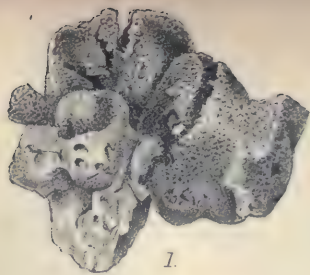


Cross—defending the post of Rorke's Drift, was hit on the ankle by a bullet. The wound was a small one. The projectile struck just over the instep of the left foot, a little anterior to the outer malleolus. When I saw him four days after the injury there was very great swelling of all the tissues in the neighbourhood, both ankle and foot. Poultices were kept regularly applied, and in two days evidence of diffuse suppuration was found, necessitating my making several long incisions into the tissues. After this was done and the poultices continued for some time, he made a very rapid recovery, and regained the use of his joint. The bullet must, in this case, have been an ordinary round one, which had ricocheted off some box or stone and struck the patient in the ankle.

CASE II.—Private H. E., of the 3rd 60th Rifles, was wounded, at the Ingogo fight, in the left ankle, near the inner malleolus. There was considerable difference of opinion, because of the difficulty in finding the bullet, as to whether there was one present or not. There was considerable swelling, great discharge of pus, and distinct evidence of injury to the malleolar process. On the 14th of April he was placed under chloroform, and with a Nelaton probe I obtained evidence of the presence of lead. No forceps could be made to reach or seize the mass. I accordingly made a free incision and cut up the bone with strong pliers, and extracted several irregular pieces of lead, the result, no doubt, of a broken-up spent bullet. The case at once took healthy action and got well.

CASE III.—No. 3472, Private H. B., of the 3rd 60th Rifles, was shot through the right knee, as already recorded, the bullet lodging in the left ankle. A sore was found at the lower end of the tibia, full of pus. Several pieces of bone had become loose and been taken away. When I introduced a probe I felt something round and hard. The presence of a bullet had not been suspected. Applying the porcelain-ended probe, a mark of lead was obtained. I enlarged the wound, and seized the bullet, which was firmly impacted in the bone, by its base and extracted it. It was one of our own bullets, Martini-Henry, in the most perfect preservation, the apex of it alone being a little flattened by the opposition it had encountered in its flight. The bullet had remained in its position for over six weeks, and in consequence there was a large amount of carious bone in its neighbourhood. I removed all the detached portions and as much as I dared of the bare parts, without unduly interfering with the surroundings of the joint. The patient having lost his other leg, I was the more careful of the remaining one. A little more removed at the time, I think now, would have been the better practice, for continuous suppuration took place for a very long time afterwards, during the progress of the formation of new callus. However, ultimately a strong, movable joint

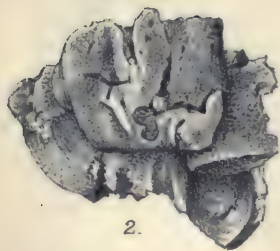




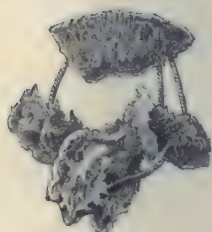
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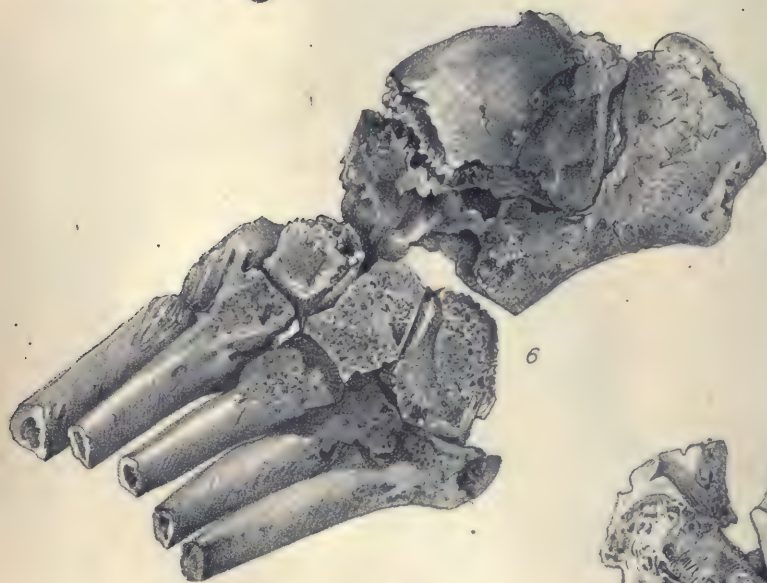
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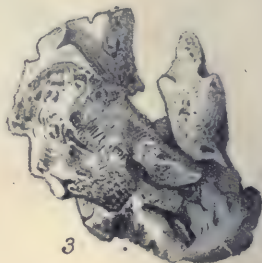
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*Plate IX.*



resulted, which, with his cork leg, served all the purposes of locomotion.

(To be continued.)

## DESCRIPTION OF THE PLATES.

### PLATE IV.

- 1 and 2 show the conditions found anteriorly and posteriorly in the shaft of the humerus in the case of Corporal H., of the 3rd 60th Rifles, shot at the Ingogo.
- 3 represents the portion of the shaft of the humerus taken out in the case of Private B., 94th Regiment.
- 4 illustrates the condition of the bones of the leg found in seaman H.'s case.

### PLATE VII.

Case of Private Brett, 3rd 60th Regiment, wounded at the Ingogo. Amputation at lower third of thigh. Recovery.

### PLATE VIII.

- 1 and 2 present the anterior and posterior aspects of the bones forming the joint removed from the arm of Lieut. H., 58th Regiment, wounded on the Majuba Hill.

### PLATE IX.

- 1, 2, and 3 show portions of ulna and radius removed, along with the rest of the carpus and joint, in the case of Captain H., 92nd Highlanders. The whole of the bones were not preserved.
- 4 and 5 represent the fragments of the head of the humerus found in the glenoid cavity at the time of operation in the case of Private S., 94th Regiment.
- 6 shows the bones of the foot of Private W., 58th Regiment, removed by amputation.

## Part Second.

## REVIEWS.

*Lehrbuch der Geschichte der Medicin und der epidemischen Krankheiten.* Von H. HAESER, Professor in Breslau. Dritte Auflage. Jena: 1875-81.

THE former editions of this well-known work have met with such universal approbation, that it is hardly necessary to enter into any detailed criticism of this third edition. It consists of three bulky volumes, in the first of which the author devotes himself to the consideration of the history of medicine in ancient times and in the Middle Ages. He considers in turn the views held by the Brahmans, the Egyptians, the Greeks, and the Romans; and then,

passing to the Middle Ages, he describes all the branches of medical science as they were known to the Greeks of the Byzantine period, to the Arabians, in the ancient universities of Salerno, Padua, Bologna, Montpellier, and at the various seats of learning in Spain, England, and Germany. The first volume finishes with an interesting chapter on the general status of those practising medicine in the Middle Ages.

In the second volume Professor Haeser deals with the history of medicine from the end of the Middle Ages down to modern times. Each century, as it is described to us in these elaborate chapters, reveals its own eminent men, their history and their works, as well as the general onward march of medical knowledge which each can show. The mastery of detail evinced in these pages is very striking, and they form a most valuable mine of collected information for future workers. What appears to us the most important part of the whole work is that contained in the third volume. In it the author deals in a most masterly manner with the various great epidemics which have at different times swept over the world. The plagues of the Middle Ages are fully described, such as leprosy, black death, *ignis beatæ virginis*, etc., and their origin and course detailed at considerable length. Then follow the psychic disorders of that period—the dancing sickness and the children's crusade. The remaining portion of the volume is devoted to the epidemics of more modern times—syphilis, typhus, and in particular cholera. As is natural, the last named of these receives most attention. Its various great epidemics are most minutely and interestingly described.

Although only a very imperfect description has here been given of the contents of this most valuable work, yet probably enough has been said to show its great range and its remarkable minuteness. So far as we can judge, its accuracy of detail appears to be equally praiseworthy, and it is undoubtedly a work of very great value as a historical research.

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*Études de Thérapeutique, générale et spéciale, avec applications aux maladies les plus usuelles.* Par le Docteur A. LUTON, Professeur de clinique médicale, Directeur de l'école de médecine de Reims, etc. Paris: Baillière et Fils: 1882.

IN the preface to this work the author states that it is the fruit of twenty-five years of practice. It certainly bears the stamp of original thought and of careful observation of fact. The book consists of a series of essays on different points in therapeutics. The first portion contains chapters upon purgative, derivative, and tonic medication, on regimen, and other kindred subjects; and while the views expressed are often somewhat heterodox, there runs through them all a vein of originality which makes the treatment

of the subject interesting. In the second division of the book we have an essay on hypodermic medication, which, although not equal to the special monographs on the subject, is yet very readable; another on the treatment of alcoholism with strychnia; and a third on the action of the cyanides on rheumatism. There follow numerous shorter chapters on other special points in therapeutics. On the whole, the volume gives us the impression of conscientious and painstaking observation, united to a very special knowledge of the science of therapeutics.

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*Tables of Materia Medica: a Companion to the Materia Medica Museum.* By T. LAUDER BRUNTON, M.D., F.R.S., etc., Examiner in Materia Medica in the University of London. New Edition. London: Macmillan & Co.: 1883.

WE are glad to see that this excellent work has reached another edition. These "tables" will be found very useful to the student to "recall to his mind what he has learned from larger text-books, and also to help him to arrange the material he has acquired in a convenient form." The least satisfactory part of the tables is that which assigns their relative values to the various medicines. The author tells us he has followed chiefly, in this respect, Professors Harvey and Davidson, and, of course, has fallen into their errors. It is curious to find such high authorities marking amongst important medicines cherry-laurel water, a preparation only useful for the hydrocyanic acid contained in it, which is never much, and, what is worse, always very uncertain.

The student will find in the introduction much valuable information, succinctly stated. On the other hand, there are statements and descriptions which must be received with great caution by the student. Under the author's classification "Roots," he gives sassafras as an example of a *branching* root. Now, though it be correct that this root sometimes branches, yet it is equally true that its branching character is seldom, if ever, seen by students. Most botanists would be inclined to class liquorice amongst the rhizomes. It is difficult to understand on what principle he speaks of the two rhizomes podophyllum and valerian, the former as about the size of a quill, and the latter as much smaller than a quill. A very important part of the introduction is that which treats of the "substances liable to be mistaken for one another." Here also, however, it is not easy to explain how any one could possibly confound some of the substances here quoted, as kamala for cantharidis pulvis, kino for coccus, assafoetida for myrrha, and many others which might be quoted. There is no occasion for mentioning aconite root as likely to be confounded with the root of the horse-radish—a mistake which no medical student ever committed. No two roots are more dissimilar than these two, and the instances on record of their being con-



founded occurred only with ignorant cooks or butlers who knew nothing of the appearances of either root.

We have pointed out some of the defects in this very excellent work by a very able author, and we hope to find that another edition will soon be called for, and that these deficiencies will be corrected. We have much pleasure in highly recommending the book to students and practitioners.

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*The Contagiousness of Pulmonary Consumption, and its Antiseptic Treatment.* By J. BURNEY YEO, M.D. London: J. & A. Churchill: 1882.

THIS little work is one of the many fruits of Koch's recent discovery of the *Bacillus Tuberculosis*, and it gives in an easy, colloquial form the main points relating to that subject. The contagiousness of phthisis has, of course, long been believed in, but Dr Yeo adduces some very interesting clinical proof on the point. The second half of the book is concerned with the antiseptic treatment of phthisis. Dr Yeo recommends the use of an inhalation-respirator, which has the great advantage of cheapness, being readily made by cutting perforated zinc into a particular shape, and so folding it as to make a mask to cover nose and mouth. In this he places a sponge saturated with antiseptic vaporizable fluid. Of all such substances the author prefers creasote, but he gives in an appendix a number of formulæ for other antiseptics. In a series of notes at the end of the little work Dr Yeo describes the instruments for continuous inhalation which have been recommended by others, such as the respirators of Williams, Coghill, and Roberts. On the whole, the book appears well fitted to give practical information in regard to the antiseptic treatment of lung disease.

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*Lithotomy, Lithotrity, etc.; also, The Prevention of Stricture and Prostatic Obstruction.* By R. HARRISON, F.R.C.S. London: J. & A. Churchill: 1883.

THESE papers by Mr Harrison, which are published as two booklets, are valuable contributions to surgical experience. On lithotomy there is little said that is new. In speaking of the suprapubic operation, the author states as his opinion that a perineal opening, by draining the bladder, would make the operation safer; and, by enabling the surgeon to aid the extraction of the calculus with one finger in the bladder through the perineum, make the operation easier of performance. Writing on lithotrity, Mr Harrison is highly eulogistic of Prof. Bigelow's rapid operation. He

makes an interesting quotation from the *British Medical Journal*, in which the operation and operator were unreservedly condemned. It is not the first time our cotemporary has stepped in to condemn a proceeding before knowing thoroughly about it. We are glad to see that Mr Harrison considers the ordinary and more simple instruments and apparatus quite sufficient for the treatment of stone by litholapaxy. With the patient under chloroform, with an easily worked, light lithotrite, with a large evacuating catheter, with a good washing apparatus, and with a proper knowledge of the parts to be operated on, any surgeon should be able to remove a moderate-sized calculus in the course of an hour without doing his patient any harm.

Mr Harrison's remarks on gleet and commencing stricture are good and practical, but, most unfortunately, they end in the recommendation of a special apparatus and method of application. We agree with the author in believing that the multitude of remedies and their failure to cure all cases points to a deficiency in our knowledge of the pathology of the affection. Mr Harrison's long injecting catheter is just an addition to the numerous methods destined to endure only for a while. We agree with him in this, that the centre of the trouble is generally situated at or near the bulbous portion of the urethra, and that the real difficulty is to get at that point and to treat it directly. We do not think that a perfect method of accomplishing this has yet been devised. But Mr Harrison certainly deserves credit for pointing out once more the proper direction in which investigation should be made for the discovery of a simple and generally applicable method of treatment. We are considerably interested in the last paper, on the prevention of prostatic obstruction. Mr Harrison refers to the power of pressure in causing absorption, and argues that consequently the pressure of a catheter passed daily through the prostate into the bladder will prevent enlargement of the gland. While we do not doubt that the regular use of a catheter will keep a passage to the bladder open, we cannot see how any such procedure could prevent hypertrophy. Pressure, to cause absorption, must be constant. Intermittent pressure produces hypertrophy. Mr Harrison mentions ergot of rye with favour as having done good in cases of enlarged prostate. He considers that it helps to restore tone to the bladder.

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*Difficult Lithotomy with Complications ending Fatally.* (From the *Proceedings of the Medical Society of the County of Kings*, June 1883.) By Dr J. S. WIGHT.

DR J. S. WIGHT deserves great credit for publishing an account of an unsuccessful but most interesting case of lithotomy. His reason for doing so is in his own words:—"I can do more good, and bring more benefit to surgery, by reporting this case,

which eventuated in disaster, than by reporting all my successful cases, in which I would only repeat anatomical and surgical facts familiar to all." When an unfortunate case is thus honestly and straightforwardly recorded, without any attempt at varnishing or extenuation, criticism is disarmed. We shall therefore merely give our readers a short account of the case.

The patient, 56 years of age, was brought to Dr Wight to be operated on for stone in the bladder. He was sounded by several surgeons, who all declared that he had a calculus, which could be felt by the finger in the rectum as well as by means of the sound in the bladder. The ordinary symptoms of calculus were present, and the man was considered to be otherwise in good health. It was determined, therefore, to operate. On the table the stone was again felt. In making the first incision the point of the staff slipped out of the bladder and could not be again introduced. Dr Wight had therefore to cut his way to the bladder as best he could. No stone was found. Patient had suppression of urine, and died in two days. At the post-mortem examination the following condition of parts was found. 1. There was a false passage below the urethra at the membranous and prostatic portions, in which most probably the staff had been, and along which Dr Wight's knife had passed into the bladder. 2. The prostate was enlarged, and the third lobe enlarged, pedunculated, and movable, hanging down into the bladder, and coated with phosphates. This had been mistaken for a calculus by all the surgeons. 3. There was extensive fatty degeneration of both kidneys, especially the left.

Comment on this very interesting case is unnecessary, as the facts sufficiently explain themselves. Were Dr Wight's example more frequently followed, the profession and also the public would doubtless be greatly benefited, and statistics made more reliable.

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*Clinical Lectures on Diseases of the Urinary Organs.* By SIR HENRY THOMPSON. Seventh Edition. London: J. & A. Churchill: 1883.

THE publication of a new edition only one year after the last is sufficient evidence of the estimation in which this standard work is held by the profession. Doubtless the cheap form in which the lectures were published tended to their speedy sale.

This new edition contains two new lectures, on "Tumours of the Bladder" and "Digital Exploration of the Bladder." There is also a more extended notice of litholapaxy, which the author regards as superseding the old operation of lithotrity, and to a great extent also lithotomy.

This new "Students' Edition" is well worth having for the sake even of the two new lectures.



*Der Chronische Nasen- und Rachen-Katarrh.* Dr MAXIMILIAN  
BRESGEN, in Frankfurt am Main.

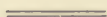
AFTER dealing with the question of specialism in medicine, the author proceeds to the subject proper of his *brochure*, namely, the diseases of the pharynx, naso-pharynx, and nose. These are considered under the following heads:—(1.) The examination; (2.) The etiology; (3.) The symptoms and course; and (4.) The treatment. Under examination, the author advocates the pencilling of the pharynx with a solution of iod.-glycerine in cases of catarrh where the irritability or sensitiveness is great. In regard to the etiology of these diseases, he gives credit to both local and constitutional causes, the former being represented by frequent attacks of the acute form of the disease, and the latter by scrofula. In children more especially chronic nasal catarrh has always a scrofulous basis. The description of the symptoms and course of the disease embraces little that is new. The treatment recommended is that usually adopted, constitutional and local. The constitutional is mainly dietetic and hygienic, whilst the local consists of the application of remedies such as the galvano-cautery, powdered nitrate of silver diluted with starch or chalk, and other mild caustics and astringents. The author strongly insists upon abstention from tobacco, spirits, wine, beer, and highly-spiced foods. The use of the nasal douche and nasal syringe, anteriorly and posteriorly, is also recommended, and the author states that he has never seen any injurious effects produced upon the Eustachian orifice or tube by their use. In severe cases they ought to be used at least eight times daily, and gradually diminished as the patient improves. Upon the whole, this small work, whilst not marked by originality, gives a careful summary of the diseases with which it professes to deal, and is therefore well worthy of perusal by those interested in the subject.

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*Speech and its Defects, considered Physiologically, Pathologically, Historically, and Remedially.* By SAMUEL O. L. POTTER, M.A., M.D. Lea Prize Thesis of Jefferson Medical College. Published by permission of the Faculty. Philadelphia: P. Blakiston, Son, & Co. : 1882.

It cannot be said that Dr Potter adds anything new to the subject of stammering or stuttering; but he gives an interesting and valuable critical *résumé* of the different views that have been propounded regarding the ætiology, pathology, and treatment of this malady. Perhaps it is not altogether correct to say that he adds nothing new, for he claims originality for his classification of the defects of speech, which he divides into Alalia, entire absence of

speech; Paralalia, vicious pronunciation, as substituting *w* for *r*, lisping, burring, etc.; and Dyslalia or stuttering. These are subdivided into minor forms. Dyslalia, being the most important, is discussed at length. Its pathology Dr Potter holds, with Bristowe, to be spasm of the vocal and articulating organs; its chief proximate causes, irritation and mental expectancy; and its treatment, disciplinary exercise of the respiratory, vocal, and articulating organs. This must be "conducted unremittingly and patiently, until a correct habit of speech is established," and must be "aided by the use of the utmost degree of will-power of which the patient is capable." Tricks devised by patients and "stutter-doctors" may be of some slight temporary benefit, and some indirect good may be got from internal medication and electricity, but these can only be considered as adjuncts to the regular treatment. The essay is written in an instructive and agreeable style, but it is to a certain extent marred by the nomenclature, which is almost as bad in some of the works on stuttering as it is in those on dermatology. In justice it must be said that the author has the good taste to condemn some of the pedantic terms—*e.g.*, "pneumo-laryngo-gnatho-cheilomania," "pneumo-laryngo-gnatho-glosso-cheilomania"—found in a few of the older works. For those who may wish to pursue the study of this subject further, Dr Potter adds to his essay a very valuable and extensive bibliography.



*Notes on Dislocations of the Thumb.* By J. E. KELLY, F.R.C.S.I.  
Reprinted from the *Dublin Journal of Medical Science*, May 1883.

MR KELLY has specially devoted himself to the study of dislocations, and we have recently noticed his papers on dislocation of the humerus and of the femur. In the present pamphlet a large number of writers and authorities on dislocation of the thumb are quoted. We would recommend to Mr Kelly a paper which he does not seem to have noticed, by Dr Farabeuf, in the *Archives Générales de Médecine* for March 1876, where the whole subject is most ably demonstrated with the aid of several first-rate woodcuts. Mr Kelly quotes authorities for ten different causes for the difficulty in reducing dislocation of the phalanx of the thumb on the metacarpal bone. We then have a minute and particular account of the form of the head of the metacarpal bone, its attachment to the phalanx, and the position of the various tendons, extensor as well as flexor. One thing is not mentioned in regard to the metacarpal bone, namely, its flattened form, which makes its transverse diameter greater than that from the dorsal to the palmar surface. This peculiar form has something to do, we believe, with the difficulty in reduction of a dislocation and with the rotation of the phalanx that occurs. The principal cause of the difficulty is, no doubt, as

pointed out by Mr Kelly. the slipping of the metacarpal head into the fork between the tendons of the flexor brevis. As to reduction, Mr Kelly gives us the best method:—1. Bending the phalanges backwards. 2. Flexing them towards the palm while pressing them firmly against the metacarpal. Several simple means are mentioned for aiding manipulation. Mr Kelly does not, however, refer to the handle of a door-key, which is very effectual and always handy.

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*The Student's Guide to Surgical Diagnosis.* By CHRISTOPHER HEATH, F.R.C.S., Holme Professor of Clinical Surgery in University College, etc. Second Edition. London: J. & A. Churchill: 1883.

WE are glad to welcome a second edition of Mr Heath's little work, which is as near an approach as the student can have to the rudiments of clinical surgery. Every one commencing clinical studies or the examination of surgical cases ought to possess himself of a copy. It should prove a valuable adjunct to the teaching that has been given of late years in several of the out-patient rooms of the Edinburgh Royal Infirmary.

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*Mechanical Exercise as a Means of Cure, being a Description of the Zander Institute, London (7 Soho Square), its History, Appliances, Scope, and Object.* Edited by the Medical Officer to the Institution. London: J. & A. Churchill: 1883.

THIS work may be described as an elegant advertisement of the Zander Institute, and a guide to mechanico-therapeutics as practised there. It contains a description of the various machines invented by Dr Zander. These, we are told, are curative or beneficial in rheumatic affections, stiffness of joints, paralysis, constipation, sciatica, lumbago, spinal curvatures (lateral), feeble circulation, and obesity. Mechanico-therapeutics *à la* Dr Zander have, like electro-therapeutics, a future before them; but it is unfortunate that, from the number and nature of the machines requisite, they are not at all likely to come into general use. Two things strike us in reading over the descriptions of these machines. The first is, the question whether good can be done by attempting to give a joint a movement which it does not possess, *e.g.*, rotation of the ankle, which hitherto we believed to be a hinge-joint, incapable of a rotatory movement. The second is, that it must be rather uncomfortable for patients on the vibrating machine, when taking a shaking on the os sacrum, to feel that "the walls of the rectum and bladder vigorously contract, especially if they are full."



*Descriptive Catalogue of the Pathological Museum of University College, Liverpool (Royal Infirmary School of Medicine).*  
Liverpool: Printed for the Medical Faculty of the College: 1883.

THIS catalogue must prove a valuable aid to the Liverpool student in his study of naked-eye pathology. The specimens are arranged anatomically according to the regions from which they have been taken, and each section is preceded by a series of general pathological notes. It thus "forms a short and condensed text-book, describing the various morbid conditions, and referring by way of practical illustration to the specimens on the shelves, a brief reference to the history of the cases being often appended."

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### Part Third.

#### MEETINGS OF SOCIETIES.

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#### MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

##### SESSION LXII.—MEETING IX.

*Wednesday, 4th July 1883.—Dr G. W. BALFOUR, President, in the Chair.*

##### I. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1, 2, and 3. *Mr Symington* showed (1) a specimen of CONGENITAL ABSENCE OF THE RADIUS in a seven months' foetus, in which, before dissection was made, there was a well-marked appearance of club-hand. On making the dissection an entire absence of the radius was found, and, in addition, atrophy of the muscles connected with that bone. (2) A SHOULDER-JOINT in a condition of CHRONIC RHEUMATIC ARTHRITIS. Before dissection it had all the appearances of, and had been diagnosed by a well-known surgeon as an unreduced sub-coracoid dislocation of the humerus. There was a well-marked squareness of the shoulder, and a hollow beneath the acromion process. The head of the bone was felt below the coracoid. Dissection showed that the condition was one of chronic rheumatic arthritis, and that the head of the bone had extended forwards so as to be felt beneath the coracoid process, to a certain extent justifying the diagnosis. The specimen was from the body of an old man. (3) A COLLES' FRACTURE. Before dissection the specimen showed the typical appearances of, and was diagnosed as, a united Collès' fracture. On the bone being cleared of the soft parts, a slight irregularity, not unlike the cicatrix occurring after fracture, was found a quarter of an inch above the lower end. Two inches further up the shaft there was distinct evidence of fracture. A longitudinal section showed that this was the only fracture that

had occurred. The specimen was interesting, as showing fracture in the position originally described by Colles.

4 and 5. *Dr Allan Gray* showed (1) a CARTILAGINOUS PLEURA. The patient from whom it was taken, a big, ungainly man, stalwart and taciturn, was admitted to Leith Hospital a few days after the New Year, complaining of breathlessness. On physical examination there was a soft mitral systolic murmur. The left lung had simply bronchitic symptoms. The two sides of the chest were equal on measurement. The right lung did not, however, move, either on quiet or forced respiration. The breath sounds were very distant. There was no vocal resonance nor fremitus. Pleurisy with effusion being diagnosed, it was resolved to aspirate. This was attempted in the usual situation, but the needle failed to enter the pleural cavity. It had not impinged on the rib. Other attempts to aspirate were made, both on that occasion and a week later, but failure attended each. The patient went out with the bronchitis cleared up and the health improved. He was brought in again early in June, comatose, and died within a few hours of admission. Post-mortem examination showed the right lung compressed against the spinal column, the pleural cavity, containing seventy-five ounces of pus, enclosed in cartilaginous-like walls. In the heart there were dilatation of the mitral valve and slight atheroma of the aorta, but no vegetations to account for the embolism of the left vertebral artery, which had been the cause of death. (The right vertebral artery had been obliterated on a previous occasion). (2) A CAST OF A THORACIC TUMOUR, diagnosed as an aneurism. The cast was taken after death. The patient had died of exhaustion, not of bursting of the aneurism.

6, 7, and 8. *Dr MacGillivray* showed (1) SPECIMENS FROM THE ABDOMINAL CAVITY OF A WOMAN, æt. 60, on whom he had performed ovariectomy three years before. She had died of bronchitis, in Hartlepool, about three months ago, and Dr Morrison made a post-mortem examination. There were, first, a portion of the anterior abdominal wall, showing the peritoneal cicatrix, to which was attached a portion of omentum which had become protruded in the form of an incomplete hernia; second, a stretched adhesion of the pedicle to a portion of small intestine, a condition that was of importance, as it might have given rise to internal strangulation; third, the uterus, ovary, and pedicle of the tumour which had been removed. Round the pedicle two ligatures of antiseptic silk had been put. The specimen showed how these had become encapsuled. They were close together when applied, but were now about an inch apart. (2) A large piece of OMENTUM, removed by Dr Watson from a woman, æt. 61, upon whom he had operated for irreducible femoral hernia. The omentum was cut off after restoring the bowel to the abdominal cavity, and the neck of the sac stitched with chromic catgut. The patient had been operated on some years before, in the country, the hernia

having become strangulated. (3) A set of FALSE UPPER TEETH, swallowed inadvertently on Saturday night by a woman, æt. 32, in Kirkcaldy. She was sent over on Sunday morning to be under Professor Annandale's care. He being from home, Dr MacGillivray was sent for. The house-surgeon had attempted to remove the plate with œsophageal forceps. He had succeeded in laying hold of it as it lay behind the manubrium sterni, but, on attempting to pull it up, found he could not dislodge it from the œsophagus. It was fixed in the mucous membrane. Dr MacGillivray, making a second attempt and failing, thought it wise, although the symptoms were not very distressing, to perform œsophagotomy. This was done on the left side in the usual way, an ivory-headed probang being passed into the œsophagus as a guide. Passing in the dressing forceps through the œsophageal wound, he was able to lay hold of the plate, but could not dislodge it, the hook being fixed in the mucous membrane, until he passed in his finger. By a little manipulation he succeeded in getting it out. The question then came to be, what to do with the internal wound, whether to leave it alone or put in sutures. He thought it best to put them in, and did so after the method of Lembert in treating wounds of the intestine, the outer surfaces being brought together by a series of interrupted sutures. The external wound was treated with the carbolate of glycerine, and sutured in the ordinary way, a drainage-tube being inserted, so that any risk of post-mediastinal abscess from burrowing of matter might be avoided. Since the operation the patient has done very well. There had been no rise in pulse or temperature. He had intended not to have fed her by the mouth for at least the first forty-eight hours, lest the food or the tube passed might interfere with the union of the internal wound and allow of matter passing into the tissues and burrowing there, but Prof. Annandale thought the risk of dying from inanition should not be run, and had her fed with milk and eggs through a gum elastic catheter passed through the mouth into the stomach. The result showed that the passage of the instrument had not been productive of harm. There was no symptom of the internal wound having been interfered with. A slight laryngeal cough for a day or two made it probable that the recurrent laryngeal nerve had probably been irritated in the course of the operation.

## II. ORIGINAL COMMUNICATION.

*Dr A. James* read a paper on NUTRITION AND REPRODUCTION CONSIDERED GENERALLY, AND AS BEARING ON THE ÆTIOLOGY AND TREATMENT OF DISEASE, which appears at p 97 of this Journal.

*The President* thought he need hardly say, for it was evidently the universal opinion, that they were greatly indebted to Dr James for his instructive and valuable paper, and he hoped they would show how much they appreciated it by criticising it. It was a paper



open to criticism, and in this way they might pay it the highest compliment.

*Dr Angus Macdonald* said it was from no feeling of fitness to criticise the merits of the exceedingly able paper to which they had now listened that he rose to speak, but simply to start a discussion upon it, for he must confess that much of the paper was of such a difficult nature that it was impossible for him adequately to comprehend it at a single hearing. There were one or two points in connexion with the department of study which he specially cultivated that he would like to advert to, and especially that view started regarding the cleavage of the yolk, which, while it was argued by Dr James with his characteristic ingenuity and force, did not present itself to him as quite convincing. Dr James maintained that as the yolk grew the nourishment it obtained must all pass through its surface, and that its mass increased too fast for its surface, so that by-and-by it split up through inanition—in fact, that as the masses of spheres of different radii varied as the cubes of their radii, and the surfaces of like spheres varied as the squares of their radii, there arose rapidly a disproportion between the means or channel of nutrition and the mass of the yolk as it increased in bulk. Now, as the mass of a sphere was undoubtedly  $\frac{4}{3}\Pi\gamma^3$ , and the circumference is  $4\Pi\gamma^2$ , neglecting the constants, it follows that the mass varied as  $\gamma^3$  and the circumference as  $\gamma^2$ , so that on that point Dr James appeared to be mathematically correct. But it would appear to him rather to show that the form of the sphere was an essentially vicious one for the maintenance of growth, as one could hardly know what radius was the proper one, and there must in every cell exist a point where nutrition was so nicely balanced that on either side of it it was liable either to be stuffed or starved. Granting, however, Dr James's view to be true, the result would not be cleavage and multiplication, but breaking up of the yolk and destruction of it. They had, by the analogy of what took place in the formation of adipose tissue, tolerably evident proof of what occurred when a cell outgrew in size the nutritive influences of its surroundings. It was changed into a mass of fat, and lost its nucleus. Cleavage and multiplication was the last thing it was capable of. Now he believed that if the yolk were operated on by the influence Dr James suggests, fatty degeneration or other form of destruction would take place in its contents, and not continuous fissiparous cell development and multiplication. So far as he could understand Dr James's theory applied to the formation of pus, which was a retrogressive product and evidence of weakness, he thought his views correct. To the references in the paper bearing upon chlorosis he had listened with very great interest, and looked upon them as exceedingly suggestive, and helping to explain some doubtful points in that wayward disease. But he must be held at present as merely considering the bearings of the suggestions, and

not as acquiescing in or denying them till he had a further opportunity to consider the deductions with that care and attention their importance and originality invited. He would not detain the Society further, but would sit down after again expressing his sense of the high merits of the paper, and hoping that they would have an interesting discussion from some of the physicians present whose department was chiefly concerned by most of the important inferences, such as those relating to sclerosis, anæmia, and so forth, contained in the communication.

*Mr Cathcart* felt in some respects like *Dr Macdonald*. There was a good deal of the paper he was unable to follow without some reflection, but one or two points he had noted as calling for some more explanation from *Dr James*. Taking the general law that the same cause produced different effects when applied in different degrees, *Dr James* had illustrated it by referring to the different effects of ordinary and concentrated light on a leaf. In the one case there was a building up, in the other a breaking down, of tissue. He thought, however, that really there was here more than a mere difference in degree. The effect of the concentrated light was that of heat, and they got the same effect, viz., the breaking down of the tissues of the leaf, by putting it in a dark oven away from the light. At the same time, he thought the general principle of one cause having different effects in different degrees was true, and was of great importance. It was to this that they owed the effects of stimuli, from a gentle stimulus up to the severest stages of inflammation. They knew that by heat or cold or chemicals they could produce a slight irritation of the tissues or a severe inflammation, according as these stimuli were applied. Again, *Dr James* had explained the tendency to fatness in old age as being due to diminished nerve-force admitting of over-production. He did not know what law governed it, but there was a certain number of old people who were remarkably thin. As to reproduction, he was inclined to agree with *Dr Macdonald*. He thought that while the multiplication of a cell might prevent its breaking down, the cell showed a tendency to multiply before it got to a stage where breaking down would have shown itself. Further, in reference to the formation of granulation tissue and pus, it had been found that whatever diminished the vitality of the tissue tended to produce inflammation. If heat were applied to any part up to a certain point, they would get hyperæmia, and beyond that inflammation. So with cold, a slight amount produced hyperæmia, a greater amount inflammation. The old explanation, which seemed to him a perfectly feasible one, was that there was an injury to the vitality of the tissue. He would like to ask *Dr James* if he would substitute "nutrition" for "vitality" in these cases.

*Mr A. G. Miller* said he had listened with very great pleasure to *Dr James's* paper, but would have preferred it in two sections. The first part of it gave them quite sufficient for reflection for one evening. He was glad to get an explanation of the possible pro-



duction of pus corpuscles such as was given them. He always held that some such process must be the cause of their production, for they saw them occurring in so many different regions and in the neighbourhood of so many different varieties of other cells. As pus could not be organized into higher tissue, it was evident that there was deficient nutrition. Pus was a product of mal-nutrition rather than over-nutrition. Going back to an earlier part of the paper, it seemed to him that Dr James wanted to establish one point, that he considered tissue change and tissue health to be identical. This seemed to him to point very strongly, in connexion with the disease of chlorosis, to a connexion between chlorosis and one apparent cause of it with which he had often been struck. They found chlorosis to a large extent in young females, many of them being servant girls. These were especially fond of a paratryptic, namely, tea. It occurred to him that there was a suggestion, not only for the treatment, but a suggestion as to the ætiology of chlorosis, that it might be due to an excess of paratryptics which caused deficient building up or an atrophy of tissue. As to the connexion between nutrition and reproduction, his view of Dr James's argument differed from Dr Macdonald's. He understood Dr James to say the cell surface and its contents increased in different proportions, that the mass increased in proportion much more than the surface, and that thus the cell's capability for deriving nutrition would be diminished, and would fail at a certain point.

*Dr MacGillivray* was emboldened by the example of others to ask for explanations on certain points. The paper was not in all respects easily followed. To use Dr James's own illustration of the leaf, so long as it was supplied with the bright light of heaven it grew and developed, but concentrate on it the same light by means of a burning-glass, and destruction was the result. So with Dr James's paper, so long as they had the bright light of Dr James's own views, their ideas developed, but when it came to the concentrated light of Herbert Spencer, then destruction of all thought and meaning was the unfortunate result. Then as to nerve force. A modified amount, according to Dr James, promoted growth and development in a muscle; an increased amount, destruction. If that were so, then how about a blacksmith's arm? There they had increased nerve force followed, not by destruction, but by excessive development. Then, regarding the theory of cell growth, no doubt when a cell increased in size its surface did not increase in proportion to its mass, and therefore its nourishment decreased, and it broke down into numerous particles, which, according to Dr James, developed into cells similar to the parent. But in order to do this was it not necessary that the quality of the cell should remain the same, and was this the case? To take the example of the pus cell, which was a living body in a nutrient fluid, it certainly tended to break down at a certain stage; but the quality of the cell mass having deteriorated, the resulting particles



did not develop, but formed detritus. It would be interesting to hear from Dr James how he knew that with diminished nourishment the quality of the cell mass remained the same.

*Dr M'Bride* had noted two points which were open to criticism. Dr James said acute inflammation meant diminished nutrition. That might or might not be true. At any rate, they could not say that it was not. But he would like to know how, on his theory, Dr James explained that not uncommon result of inflammation of bone—hyperostosis. He was inclined to think that there was in this instance an over-nutrition rather than a want of it. Then as to enlarged lymphatic glands, it was doubtful whether these could be enlarged without a previous irritation causing increased nutrition, and thereafter the deposit of products of inflammation. He did not think that the histological difference between a lymph corpuscle and a white blood corpuscle was sufficient to entitle them to say that in one case there was a well-nourished white corpuscle and in the other an ill-nourished lymph cell.

*Dr Caird* did not see how Dr James's theory of "innutrition favouring reproduction" could be applied to tumour growth. If they took the cases of the pus corpuscle, the young fir-tree transplanted to poor soil and so "coning" early, and the cases of "twinning" met with in man, they found that in all these instances the result led to extinction. The pus corpuscle was polynucleated, as it were, in the attempt to increase its kind and multiply, but got no further; the many cones of the fir produced bad seed, which was not of value to the forester; and twins, ill adapted to perpetuate the species, being small and puny, were the progeny of women who had married late in life, or who were already exhausted by having had large families.

*Dr Affleck* said he had one question to ask Dr James in connexion with his views on chlorosis. He had assumed that there was an over-production of tissue in chlorosis, and took as the ground of his opinion the apparent plumpness of many girls who were chlorotic. The question rose, was this plump appearance in reality indicative of over-nutrition? Was it not rather a laxity of tissue due to under nutrition? He should like to know how Dr James explained the many degenerative changes that were concomitants of chlorosis—for example, the dilatation and flabbiness of the heart, and the gastric ulcers, by any theory of over-production in the tissues.

*Dr T. Duddingston Wilson* would like to point out what seemed to him a fallacy in Dr James's reasoning. He had said that innutrition tended to reproduction, but he had not pointed out that innutrition might depend on one of two things—the want of nutritive material, or the incapability of the cell to absorb the nutrients around it.

*Dr T. A. G. Balfour* said, I most cordially agree with all the previous speakers in testifying to the able, suggestive, and ingenious paper with which Dr James has favoured us, and I am sure that

we should all rejoice to have more of such papers in our Society. The very ingenuity displayed in it, and the suggestions with which it abounds, cannot fail to be productive of much good, as the amount of criticism which it has elicited abundantly proves. There is just one point to which I should like to call attention; and I trust that I am not misrepresenting Dr James in stating that, while treating of the apparent antagonism between nutrition and reproduction, and instancing the case of the cell whose circumference had not increased in the same proportion as its contents, and which latter were consequently imperfectly nourished, he remarked that in this case the individual cell, before perishing, split itself up or broke down into several swollen cells, and thus, while the individual died, the species was continued. In illustrating this he referred us to a practical application of this theory in the case of a fibrous tissue in which, when the nucleus ceases to be sufficiently nourished, it splits up into pus cells. Now, my question is this, How do these pus cells continue the species? Do they ever form fibrous tissue? The answer to these questions seems to me to be fatal to the above theory.

*Professor Chiene* said he had had the privilege of hearing the germs of the paper before, and he thought Dr James had greatly added to its practical interest by his illustrations. He thought, when he heard it, they were going back to the good old days of John Goodsir, for it reminded him of the Professor's paper on the "Centres of Nutrition." He saw nothing at all out of place in Dr James's theory. It was not a want of nutrition that tended to reproduction of the cell, but a want of capability to take in the food around. He thought it was put very simply by saying the cell divided to get more food, an occurrence of which they had many illustrations in daily life. He might even say they had Scripture for it. Abraham and Lot divided and separated that they might have more pasture for their flocks. Mr Cathcart's objection regarding the division of the nucleus raised the question what the cell was. It was the something in our bodies which ruled, so to speak, the areas around—in other words, that the cells were the centres of nutrition. In reply to Dr MacGillivray, it might be shown that when the pus cells reached a certain stage they died. It delighted him to hear the theory of tumour growth. Tumours, he held, followed inflammations. There was nothing that struck him more than this fact, that there was often a distinct history of a local injury before a tumour formed. A blow started many of those tumours. Much irritation of the cell caused it to increase and divide.

*Dr Allan Jamieson* said that Mr Chiene's observations had raised the question in his mind whether inflammation preceded not only external, but also internal tumours. He remembered the late Professor Christison saying that he had more than once noticed cancer of internal organs occurring in elderly gentlemen after some unwonted exercise, such as an Alpine tour.



*Dr James* was gratified at the reception his paper had met with. It led, of course, to a good deal of criticism, but he expected that. He tried to remember that he must not be afraid even of making a mistake. "There is no great harm in making a mistake, but there is in making none. If you show me a man who makes no mistake, you show me a man who has done nothing." It would be hardly possible for him to reply to all the remarks that were made *seriatim*. He did not think that anything had been brought forward that was really against his theory. A few minutes' private conversation with each speaker would, he thought, settle their differences. *Dr Macdonald's* contention was one of the points he was most convinced upon. He was afraid that he had not been thoroughly understood regarding this matter. Let them take as an illustration a four-pounder and a twelve-pounder shot. The latter was not three times the diameter, though it was three times the weight of the former. The surfaces and masses were not increased in proportion. The cell increased so that the proportion between its mass and surface were not kept. When it could not take sufficient nourishment, it died and reproduced itself. With regard to the effects of ordinary and concentrated light, he thought the illustration served well enough. Nerve-force supplied in ordinary amount to a muscle caused building up, in excess it caused breaking down, carbonic acid being given off. Breaking down also resulted from cutting off the nerve supply. There were some other points put forward, one especially by *Dr M'Bride*, as to the excessive formation of bone or cartilaginous tumours after inflammation. He was merely considering a general principle; but if they impaired the nutrition of cartilage, the cells proliferated and might form pus; but if the process were stopped before this stage was reached, new cartilage would be formed. In this way the ætiology of tumours was accounted for. The impairment of nutrition was less where the tumour was formed than where suppuration occurred. It was simply a question of degree.

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## OBSTETRICAL SOCIETY OF EDINBURGH.

### SESSION XLII.—MEETING VII.

*Wednesday, 28th March 1883.*—Professor SIMPSON, *President, in the Chair.*

I. *The President* read his paper on SUPERINVOLUTION OF THE UTERUS, which appeared at p. 961, Vol. xxviii., of this Journal.

*Dr Hart* thanked the President, in the name of the Fellows, for his able and interesting paper. The most interesting part was that which referred to transitory superinvolution. He had seen one case in which the uterus was found to measure less than  $2\frac{1}{2}$  inches after the process of involution, but the patient subsequently conceived.



*Dr Carmichael* thought the cause of sterility must be found in the condition of the ovaries, and not in the uterus itself.

*Dr T. D. Wilson* wished to know whether galvanism had been tried in such cases. He thought that, from analogy, it might lead to increased growth of the uterus.

II. *Dr J. Milne Chapman* read his communication on a CASE OF DOUBLE OVARIOTOMY: UNUSUALLY LONG AND TWISTED PEDICLE, which appeared at p. 1086, Vol. xxviii., of this Journal.

*The President* had seen a case of death as the result of torsion of the pedicle. In a recent case in which he had operated, where both ovaries were cystic, the pedicle of the larger cyst was partially twisted. He congratulated *Dr Chapman* on the success of his first ovariectomy.

*Dr Barbour* referred to the importance of examining patients under chloroform before operating in cases where there was doubt as to the relations of the tumour. In determining the attachment of the pedicle, the drawing down of the uterus with the volsella and the examination per rectum were of great service. *Schroeder's* rule was to operate as soon as the tumour was diagnosed. The risk of the formation of adhesions more than counterbalanced the advantages of delaying the operation.

*Dr Young* had seen a case of rupture of a cyst leading to fatal peritonitis. This case had been diagnosed as one of uncomplicated peritonitis, as the existence of a tumour had not been previously ascertained.

*Dr T. D. Wilson* thought that the twisting of the pedicle might be, within certain limits, beneficial, as checking the nutrition of the tumour.

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#### SESSION XLII.—MEETING VIII.

Wednesday, 16th May 1883.—Professor SIMPSON, *President, in the Chair.*

I. *Dr T. R. Ronaldson* read his communication, NOTES OF A CASE OF HERNIA INTO THE UMBILICAL CORD; OPERATION AND RECOVERY, of which the following is an abstract:—The subject of the communication was born on the 13th of February last. At birth the child, a girl, presented the following condition:—A tube of skin, from two to three inches long, and about two inches in diameter, projected downwards and forwards from the region of the navel. At the end of this tube and below sprung the umbilical cord, but the end of it mainly consisted of a unilateral bulging in the umbilical cord, on its upper surface, about the size of a large apple. The covering of this bulging consisted simply of amnion. Its contents were portion of liver and numerous coils of intestine, and were distinctly visible through the transparent peritoneal sac and amniotic covering. The deep opening in the abdominal aponeurosis was two

by two and a half inches in diameter, and had sharp, rigid edges. The operation consisted in rawing the edges of the tube of skin where it became continuous with the umbilical cord and amniotic bulging, and of bringing them together by sutures. To accomplish this the cord had to be cut away, and to do so safely the blood-vessels of the cord were ligatured inside the tube of skin from the peritoneal surface. The child recovered without a bad symptom, and now suffers from an ordinary umbilical hernia.

*Dr Hart* thought *Dr Ronaldson* was to be congratulated on his unique case. The usual treatment would have been to be satisfied with a pad and bandage, and the child would probably have died. *Dr Ronaldson* had, by a rather bold operation, done the best thing for the child. He would suggest that the ligaturing of the umbilical vessels within the abdominal wall might be tried in cases of obstinate hæmorrhage of the cord, instead of the unsatisfactory treatment by styptics.

*Dr Chapman*.—*Lawson Tait*, in his translation of *Steiner*, refers to four cases treated by being left to heal by granulation, which recovered. He said that he would recommend some such operation as *Dr Ronaldson* had adopted.

*The President* thought that this was an important paper. He was not aware that any one had taken this important step in abdominal surgery. There was no use in waiting for a natural recovery, and *Dr Ronaldson's* success should encourage obstetricians to carry out this operation, which in *Dr Ronaldson's* hands had been so successful. He asked whether it might not be advisable to bring together the base of the sac, so as to obliterate the ring in the abdominal aponeurosis.

*Dr Ronaldson* said that after the operation described he had considered whether this could be done and a radical cure of the hernia accomplished, but he did not think that with such an opening in the abdominal aponeurosis it was a feasible operation.

II. *Dr Hart* read his communication on the ANATOMY AND ETIOLOGY OF RUPTURE OF THE VAGINA, which appeared at page 1 of this Journal.

*Dr Barbour* said that *Dr Hart's* paper was another valuable contribution to his study of the pelvic floor. The displacement of the pubic and sacral segments in parturition was a point not only of anatomical interest, but of practical importance. It was evident that the sacral segment, being forced downwards by the advancing head, would be subjected to a greater strain. *Dr Hart* had said that rupture was more frequent in the cervix than in the vagina, because the cervix was thinner than the vagina at the posterior fornix, but no proof was given of this. The interest of the paper had been greatly increased by the series of microscopical preparations which accompanied it. This was the first time that such a complete demonstration had been given before the Society. The difference

between the lax areolar tissue round the urethra, vagina, and rectum, and the denser pelvic fascia, was well brought out in them.

*The President* thanked Dr Hart for his paper, which was an admirable attempt to set out clearly the causes of rupture at one particular point. The fact that the propelling force of the uterus was directed towards this point would increase the liability to rupture here. A knowledge of the etiology of rupture was important from a medico-legal point of view. He had to give evidence, on one occasion, in a case in which a practitioner had allowed a case of transverse presentation to remain undelivered with the arm in the vagina. The death of the patient had been attributed to an overdose of chloroform. The post-mortem showed rupture of the vagina, which was undoubtedly the cause of death.

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## Part Fourth.

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### PERISCOPE.

#### MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

**GOSSYPH RADICIS CORTEX.**—This medicine is officinal in the United States, and is now coming into use in this country as a safe and valuable emmenagogue. It is the bark of the root of the *Gossypium herbaceum*, L., one of the species of cotton plants extensively cultivated in many parts of the world. The bark contains a resin which is believed to be its active principle. The preparation used is a fluid extract, given in doses of f. 3ss. to f. 3j. It has been found, in the United States, to be very powerful in causing uterine contractions. For amenorrhœa especially, due to cold, it is said to be one of the most efficient remedies known.

**GLYCEROLE OF CHLORAL AND CAMPHOR.**—Carlo Pavesi of Mortara recommends, as a very effectual anodyne embrocation in rheumatic, gouty, neuralgic, and arthritic affections, the following mixture:—

|                   |   |   |         |
|-------------------|---|---|---------|
| Camphoræ,         | . | . | gr. 75  |
| Chloral hydratis, | . | . | gr. 60  |
| Glycerini,        | . | . | f. 3iv. |
| Alcohol,          | . | . | f. 3v.  |
| Olei juniperis,   | . | . | ℥ 30    |

Mix in a vial, and expose to a gentle heat (not over 104° F.) until solution has been effected. Let cool, and keep the vial well stoppered.—*Bollet. Farmac.*, 1882; *New Remedies*.

**STIGMATA MAIDIS.**—In the *Therapeutic Gazette* for June the con-



clusions of Dr Fauthier are thus summed up under the following six heads:—1. The action of *Zea mays* is always favourable in all affections of the bladder, whether recent or chronic. 2. Maizenic acid is the active principle, and alone possesses the therapeutic properties. 3. The diuretic action is not constant, and is due to the recovery of the affected organ, and not to the medicine. 4. The best results are observed in uric and phosphatic gravel, in acute cystitis, whether simple or due to gravel, and in mucous or mucopurulent catarrh. 5. In the cases treated, the ordinary remedies for these affections had been employed without benefit, while the maize never failed to effect a cure. 6. The maizenic acid has the power of dissolving calculi and calcareous concretions by its chemical action. Its use is indicated in cases of gout and rheumatism.

OIL OF WINTERGREEN (salicylate of methyl), diluted with an equal quantity of olive oil or soap liniment, applied externally to the joints affected by acute rheumatism, gives prompt relief, and, from its pleasant odour, is very agreeable to use.—*The Quarterly Therapeutic Review*.

BELLADONNA IN HAY FEVER.—Mr W. F. Phillips of St Mary Bourne, in the *British Medical Journal* for 14th July, recommends this drug in the treatment of hay fever or summer catarrh, and records a case in which it proved very successful. He used the *Succus belladonnæ* and gave at first 1 minim every hour, and afterwards  $1\frac{1}{2}$  minim every hour till relief was obtained.

BILIN (TAURO-CHOLIC ACID) AS A REMEDY IN CHOLERA.—Mr Henry C. Taylor of Jersey, in the *British Medical Journal*, 14th July, recommends, as an adjunct to the treatment carried out in cholera, the injecting of bilin, which he calls "the active principle of the bile," into one of the veins of the arm. He recommends for this purpose the tauro-cholate of soda. The quantity to be employed in the twenty-four hours is 100 grammes dissolved in a litre of water—about  $6\frac{1}{2}$  grains in f.  $\text{℥xxxv}$ .—at the temperature of the blood, that being the "quantity corresponding to the bile usually secreted by the liver."

GALIAM APARINE AS A REMEDY FOR CHRONIC ULCERS.—Professor Quinlan of Dublin, in the *British Medical Journal* for 16th June, recommends this plant for chronic ulcers, and relates some very bad cases in which it proved of great benefit. This plant belongs to the *Rubiaceæ*, the order to which the cinchona, ipecacuanha, and other medicinal plants belong. It is a very common weed in all parts of Britain, growing chiefly in waste places and in hedges. It is known as "cleavers," "robin run the hedge," etc. Professor Quinlan recommends the plant to be used fresh, to be cut into parts half an inch in length, and to be "pounded into a paste in a mortar." This paste is made up into a large poultice, applied to

the ulcer, and secured with a bandage. This is renewed three times a day. In irritable ulcers he recommends the irritability to be reduced first by soothing remedies before applying the galium, otherwise it is apt to cause pain.

**GALIUM APARINE IN CANCER.**—Dr Charles Boyce, in the *British Medical Journal* for 7th July, recommends this plant as a local application in the treatment of cancer, and records cases in which he found it serviceable. He states that it is also used internally for the same disease. Five ounces of the juice of the plant are given twice a day.

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### PERISCOPE OF OTOTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

**WORD-DEAFNESS AND SOUL-DEAFNESS.**—At a meeting of the Physiological Society, Berlin, on 9th March, Dr Du Bois Reymond in the chair, Dr Wernicke gave a short sketch, reported in *Nature*, of the illness of a patient who fell sick, exhibiting all the symptoms of a cerebral tumour except epileptic attacks, and who manifested a disturbance of speech that was characterized by Dr Wernicke as a "sensorial aphasia," and by others as a "word-deafness." A sensorial aphasia consists, according to Dr Wernicke, in the fact that the patients, though in possession of a large vocabulary, no longer understand the meaning of words, that they use these confusedly, and so that their speech is quite muddled; moreover, they do not comprehend what one says to them at all, so that it is impossible to arrive at an understanding with them. The patient in question soon succumbed to an intercurrent disease, and it was possible to make a thorough dissection of the brain, which exhibited a bilateral affection of the cerebral cortex at the first temporal convolution. An accurate dissection of the ears showed that the deafness that had been observed during life was not brought about by any disease of the sound-conducting apparatus, but that it was rather to be regarded as a central deafness conditioned by the disease of the cortex of the first temporo-sphenoidal convolution, in which, as Dr Wernicke made probable so long as ten years ago, the terminal expansion of the auditory nerve has its seat. Now, the local disease of the brain cortex, and the consequent observed disturbances in hearing and speech, correspond to the manifestations of "soul-deafness" that were experimentally produced by Dr Munk in animals by extirpation of the auditory sphere (Hörspähre), and consequently establish the results of experiments on animals as true for man also. The total deafness of the patient had only set in at a later period towards the end of the disease, when the affection of the brain had passed from the cortex into the deeper structures and had destroyed the acoustic



fibres. The physiological import of the above case consists in the clearly proved limitation of the disease to the first temporo-sphenoidal convolution in a case where the clinical phenomena correspond accurately to those of "soul-deafness."—*British Medical Journal*, 28th April 1883.

THE TREATMENT OF CATARRHAL DEAFNESS IN CHILDREN.—In a paper read before the Harveian Society of London on 3rd May last Dr Field states:—Catarrh of the middle ear, while perhaps the commonest, was also, on account of its sequelæ, one of the most important causes of deafness. Its early arrest was hence of the highest moment. It might be self-curative in spite of our English climate, but the popular plan of leaving it to itself when it occurred in children was eminently unsafe. For its cure, one had to abolish the *fons et origo mali*, catarrh of the naso-pharynx. One of the first effects of the latter disease was swelling and blockage of the Eustachian tubes, and consequent deafness from rarefaction of the air in the tympanum. Obviously, all sources of colds in the head must be studiously avoided by those who would escape the chance of an attack of aural catarrh. The disease was usually very insidious, and was commonly for a long time overlooked in children, who often, on account of it, were accredited with obtuseness and obstinacy. Thickening of the membrana tympani, clogging of the tympanic cavity, and interference with the movements of the ossicles, were amongst its ultimate serious effects, and autophony and noises caused by the movements of mucus in the tympanum might occur as symptoms. Naso-pharyngeal catarrh could indirectly cause deafness by promoting mouth-breathing, and hence the constant closure of the Eustachian tube. In the more favourable cases one usually observed variation in the hearing distance. Chief among the means of remedying the disease was Politzer's air-bag. The use of this bag, as also of Valsalva's method of ventilating the tympanum, might be rendered more than futile by a too frequent employment. Astringents, tonics, and mild aperients must not, of course, be ignored, as also the influence of hygienic and local conditions, and subjects of the disease should be cautioned to provide against the admission of cold water into the ear in bathing. The paper was followed by an account of a case of congenital absence of the external auditory orifices, causing considerable interference with audition, which Mr Field had treated by operation. The procedure adopted was, first, by dissection through the posterior part of the auricle, to discover the osseous external meatus, and then to secure a permanent opening into the same by an incision into the part of the auricle immediately overlying it, and the insertion of a speculum. The operation was both tedious and productive of severe hæmorrhage, but bid fair to prove in every way successful. Dr Buzzard mentioned a case in which, after an attack of aural catarrh, there was perforation of both membranæ tympanorum.



He asked how such an untimely result could be guarded against. Was the use of Politzer's bag indicated in the early stages when severe pain was present; or should it be deferred until that had subsided? He thought it was unnecessary to make children swallow when using Politzer's bag. Mr Culver James remarked on the number of persons who were suffering from deafness in one ear through neglect of this disease in childhood. Rather than that mucus should perforate the membrana tympani, an incision should be made into it; this healed up much more readily than a natural perforation, the ragged edges of which showed little disposition to unite.—*British Medical Journal*, 26th May 1883, p. 1006.

### OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin,  
Edinburgh School of Medicine.

THE TREATMENT OF LUPUS.—G. H. Fox recommends scraping with the curette, followed by the application of some caustic, as the best mode of treatment in lupus vulgaris. Without this subsequent cauterization the disease is nearly certain to recur. When the patch is not of long standing and is superficial in its seat, the application of iodoform after scraping is the method he favours. It is painless; and while it tends to destroy the lupous cells, it promotes the speedy healing of the ulceration. On the other hand, when the growth is of long standing and the nodules are deeply seated in the corium, the use of a cone of nitrate of silver, is, he thinks, the best adjuvant to the curette. This should be pressed firmly into the little pits left after the removal of the nodules. On the nose alone the treatment by linear scarification is better than that by the curette and caustics subsequently. He has found the curette of comparatively little value in the treatment of lupus erythematosus. Of late he has applied flexible collodion containing 20 per cent. of chrysarobin, with the effect of leaving the patch in a smoother and far more healthy condition. If such mild measures are unavailing, and a cauterizing agent is called for, the ethylate of sodium is to be preferred. This blisters the skin, produces a superficial eschar, and, by a peculiar action on the bloodvessels, leaves a very slight cicatrix.—*Philadelphia Medical News*, 3rd March 1883.

THE TREATMENT OF LUPUS AT THE "ANTIQUAILLE."—Aubert contributes a valuable paper on this subject to the number of the *Annales de Dermatologie et de Syphiligraphie* for March 1883. As all methods of treatment are painful, he always anæsthetizes his patient; but to render the anæsthesia as rapid and innocent as possible, he employs the mixed method. Fifteen or twenty minutes before the ether is administered, he injects subcutaneously about  $\frac{1}{8}$  of a grain of morphia and  $\frac{1}{16}$  of a grain of atropia. The atropia lessens materially the risk of sickness or vomiting, as well

as the injurious influence of the anæsthetic on the heart. If one does not wish to anæsthetize the patient, a hypodermic injection of morphia and atropia will spare him part of the pain. He rejects cauterization with caustics as a means of destroying lupus, and likewise extirpation; there remain scraping, the actual cautery, and scarification. *Scraping*, to be effectual, must be performed with energy, and the rule in lupus is to scrape so long as any particle of tissue comes away. All the embryonal tissue can be easily detached, but the feltwork of the healthy material presents an almost unconquerable resistance. In this way, however, it is possible for the instrument to glide over small deposits of lupus embedded in the sound tissue, which form the points of departure of a recurrence. When the thin slough which results has been thrown off, the process of cauterization proceeds from the periphery to the centre, and during this it is advisable to treat and to modify the surface with some suitable application. A ten per cent. pyrogallie acid ointment is efficacious in checking exuberance of the granulations and in leading to the formation of a good cicatrix. To destroy the diseased points remaining in the sound tissues after scraping, it is well to practise, after an energetic erosion, linear scarification of the base and margins. This combined method of scraping followed by scarifications is particularly applicable to lupus erythematosus. Lupus erythematosus is a feeble new growth, whose cellules, accustomed to subsist on little, vegetate, like the plants in arid regions, notwithstanding their deficient irrigation. Scraping, followed during cicatrization by cauterization with nitrate of silver or tincture of iodine, is very suitable for the treatment of lupus of the buccal and nasal cavities. *The Actual Cautery*.—A large ball-headed cautery heated to a bright red is best, and preferable to the thermo-cautery. It should be applied with energy, so as to destroy the lupus patch and a little of the area round it. No method gives at one sitting so perfect a scar, and, above all, one less liable to recurrences. It has two inconveniences. One, that it destroys more of the surrounding tissue, while it does not leave the minimum of cicatrix which other methods do; the other, that when the eschar separates, and till cicatrization is complete, it is necessary to watch closely the healing and to check the exuberance of the granulations. Thus one cannot send a patient who has been so cauterized home, or leave him to himself, so long as the granulations need touching. Aubert uses it readily on regions habitually covered by clothes, where a slightly larger area is not of much consequence, and also in ulcerative forms of lupus, for in them scarification loses one of its chief advantages, which is, the rapid removal of the epidermis on the parts under treatment. *Scarifications*.—Dubini employed the less efficacious method of punctiform scarification, and later Veiel, and then Volkmann, who thus perfected the results obtained by scraping. Scarification by long incisions was introduced by Balmanno Squire, but it is to Vidal that we owe the only truly



effectual method, that of *closely set and crossed linear scarifications*. The best instrument for scarifications is the needle with narrow blade and double cutting edge used by Vidal. The rule is to score finely the tissues by incisions closely approximated and parallel to each other, crossed by other incisions perpendicular or a little oblique to the first, like the lines of an engraving. The incisions need not be perpendicular to the plane of the region operated on; indeed, when oblique the vessels are more thoroughly divided. But the obliquity of all the incisions taking the same direction must be similar, otherwise fine slices would be cut from the tissues. In depth they should only in special circumstances extend below the deep portion of the derma. A portion of the diseased cells is cast off, another portion degenerates and is choked in the feltwork of cicatricules which succeed the network of incisions. It is doubtful if the true lupus cellules take part in the cicatrization. Aubert inclines to the belief that so great is the tenacity of the disease, that they belong to the "irreconcilable opposition." But besides these there are a considerable number of embryonic elements, purely inflammatory, susceptible of assisting usefully in the formation of a cicatrix. It is precisely the preservation of all the useful elements which constitutes the practical value of scarification. We obtain the minimum of cicatrix and of destruction. Since the epidermis has been preserved on all points of the surface, we obtain in three or four days complete cicatrization of the areas which have been scarified. The rapidity of the growth is proportioned to the healthy condition of the epidermis. In lupus, when the epidermis preserves its continuity and some degree of thickness, its restoration is nearly as rapid as after scarification of a healthy part. But in ulcerating forms, where the epidermis is more or less destroyed, there is a marked delay, and scarification is deprived of a precious advantage, that of rapid cicatrization. It remains, however, the best method of treating lupus of the face, for it leaves the least scar, and needs least treatment or immediate supervision.—*Annales de Dermatologie et de Syphiligraphie*, March 1883.

**MEDICATED GELATINE IN THE TREATMENT OF SKIN DISEASES.**—Pick of Prague has introduced this as a clean and convenient dressing, thus obviating the necessity for bandages or plaster to retain the application. The patient takes a bath, melts the gelatine cake in a saucer placed in a basin of hot water, applies it by means of a brush, and, when it is dry, paints over it a thin coating of glycerine. The latter prevents the dried medicated gelatine from cracking and chipping off, and also keeps it flexible, so that the joint movements are not interfered with. Unna of Hamburg, in conjunction with Beiersdorf, has improved upon this so far as to incorporate the glycerine with the medicated gelatine, and furnishes a large number of formulæ, embracing most of the remedies used externally in skin diseases. This plan is especially useful for the



employment of chrysarobin in psoriasis. A five per cent. and a ten per cent. chrysarobin gelatine can thus be made: Gelatine 5 parts, glycerine 90 parts, chrysarobin 5 parts; or, Gelatine 5 parts, glycerine 85 parts, chrysarobin 10 parts. To use this in psoriasis, the patient must first be washed carefully in a warm bath with soft soap to remove the scales, and then the melted gelatine painted on the patches. In severe cases this procedure is to be repeated every second day; in milder ones it is sufficient to do so twice or three times a week. All scale formation ceases on the patches so treated, the infiltration diminishes, and finally disappears entirely. The patches themselves become quite white; the border beyond, where the gelatine has extended on to sound skin, is coloured violet. This coloration is due to the action of the secretions of the skin on the chrysarobin, and must not be confounded with the erythematous flush which this substance so often evokes. Pyrogallic acid can, in like manner, be incorporated with gelatine and glycerine, as 10 of pyrogallic acid, 20 of gelatine, and 70 of glycerine. Pyrogallic acid is specially liable to decomposition, and Unna thinks that perhaps in this way it may be better preserved than in any other, particularly if the gelatine be kept in a closed vessel. Salicylic acid gelatine can be made either five per cent. or ten per cent. or twenty per cent., as, Salicylic acid 10, gelatine 10, glycerine 45, water 35. It is especially useful in frost-bite of the ear, nose, and finger, and rapidly causes involution of the infiltration.—*Monatshefte für Praktische Dermatologie*, February 1883.

THE FURROWS AND FOLDS OF THE SKIN.—The cause of the minute cross-markings on the skin, which are found more or less universally, has always been a matter of interesting speculation. Lewinski has made these the subject of careful investigation, and has proved that they are all due to foldings as a result of repeated muscular action. The connexion between folds and movements is a double one. By an approximation of the sections of the body as a result of movement, the skin is compressed and arranged in folds which lie in one direction. On the other hand, movement may cause tension, which furrows the skin in the line of traction. The more extensive and complicated the movements are in any given part, the more elaborate will be the patterns in which these lines and markings are arranged. The arrangement can, however, always be traced back to the two factors of compression or tension. These folds implicate the superficial portions of the skin only, the epidermis and the papillary layer of the corium; the reticular layer of the latter takes no part in their production. Did these cross-markings not exist, the epidermis would be in constant danger of being separated from the corium during the movements of the body, for in these movements the corium is subjected to constant variations in tension, at one time being stretched, while at another it recovers itself.—*Virchow's Archiv*, April 1883.

## PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. ED.

**NODES IN CONGENITAL SYPHILIS.**—At a meeting of the Clinical Society of London, Dr Radcliffe Crocker described the case of a girl aged twelve. She had enteric fever five months before she came under notice, and during convalescence two nodes appeared on the forehead, one on each side of the median line. There was another tumour in the right orbit, softer than the nodes, and movable. There was no corroborative evidence of syphilis except the two upper central incisors, both of which were notched, and one was slightly pegged. No history of infantile syphilis could be obtained, and the mother and the other children were apparently quite healthy; but eventually it was ascertained that the patient was a child by a previous husband, who died soon after marriage, had lived a dissipated life, and was never well, but resented inquiries into the cause of his ill-health. Marked improvement under iodide of potassium.—*Lancet*, 9th June 1883.

**THE REPRESSION AND REGULATION OF PROSTITUTION.**—At the New York Academy of Medicine, 15th March 1883, a paper on this subject was read by Dr F. R. Sturgis. The President, Fordyce Barker, M.D., LL.D., in the chair. The paper, the author said, was prepared at the special request of the President, in order to promote the avowed objects of the society. Three points were laid down for consideration,—*first*, the causes of prostitution; *second*, the necessity of regulation; *third*, the results obtained by legislative action. Under the head of causes were enumerated,—*first*, the man, as being the prime agent; *second*, the love of dress; *third*, the absence of proper home influences, which includes a *fourth* cause, the indiscriminate herding in tenement houses; *fifth*, the increase of luxury and civilisation, thereby producing increased means for tempting women. The arguments advanced in favour of regulating the evil were,—*first*, the increase of syphilis; *second*, the number of women in New York City, based on an estimate furnished by Sanger's statistics, was placed at 6000, but this number probably represents only the known women, the clandestine class being found in the proportion of nearly 6 to 1. Dr Sturgis thought Sanger's figures were too high. Depais's statistics probably came nearer the truth, being in the proportion of, known women, 1 in every 601; clandestine, 1 in 104 of the population. Estimating the population at 1,000,000, this would give a total of over 11,000, while Sanger's statistics would make the number 42,600. The effects of legislation in various countries went to show that although it is impossible to suppress the evil, it is possible to keep it within bounds, and, whenever women are found diseased, to insist on proper treatment. In this country, at least,



one good point could be made, viz., that of insisting upon all persons found diseased by the police, or who voluntarily commit themselves at the Charity Hospital, to be retained there until cured, or until the surgeon considers them beyond the contagious period.—*Medical News*, 24th March 1883.

INFECTION BY VACCINATION.—The following is extracted from the parliamentary report of the *Scotsman*, 8th June 1883:—Sir Lyon Playfair asked the President of the Local Government Board whether one of the Board's officers, in the course of an investigation into the conditions under which syphilis could be transmitted in the act of vaccination, had infected himself with syphilis, and had seriously injured his health, and whether, if that be true, the conditions under which he succeeded in infecting himself were such as might occur during legitimate operations of vaccination? Sir Charles Dilke.—The facts sir, are substantially those set forth in the first part of the question. The officer to whom my right hon. friend refers, believing that syphilis, although it had very rarely indeed been communicated in the operations of vaccination, nevertheless might, under some circumstances, be so communicated, was desirous of learning the conditions under which such a transmission was possible. His object was to obtain better information than any of the rare and accidental cases hitherto reported could afford respecting the precautions proper to be taken for avoiding even risk of such an occurrence during the practice of vaccination. The investigation required experiments to be made on the human body, and these (though, of course, not acting as an officer of the Board) he proceeded to make on his own person, and at the end of his experiments he did infect himself with syphilis. The case is at present the subject of skilled inquiry, and a complete reply cannot be given to the second part of the question until the report is received. I may say, however, that the result of transmitting the infection of syphilis was not attained without departure, in essential respects, from the Board's instructions to public vaccinators, and from the recognised practice of all vaccinators. It is impossible for me to conclude without expressing my esteem for this official's self-devotion, and my regret for the personal suffering he has endured from his honourable sacrifice of himself in the interests of science and humanity.

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#### SURGICAL PERISCOPE.

WE select the following interesting surgical cases from three American journals:—The *Detroit Lancet* for February 1883 contains a paper by Dr Hitchcock on a case of "Obstruction of the Bowels by the Strangulation of a Loop of Intestine in an Old Hernial Sac at some time withdrawn into the Abdominal Cavity." The patient had previously suffered from double inguinal hernia, but for



two years had noticed no protrusion. When taken ill he suffered from constipation, sickness, etc. Purgatives and enemata gave no relief. The diagnosis was at first obscured by the passage of various substances, such as grape and potato skins, which were supposed to have probably caused the obstruction. No proper relief of the symptoms having occurred from the means employed up to the nineteenth day, it was decided to perform abdominal section. By this time the patient was very much reduced, and not in a favourable condition for any operation. Dr Hitchcock made his incision in the middle line, and, passing his hand to the left, found a coil of intestine tightly held in a pouch of the peritoneum, which was easily proved to have at one time formed the sac of an inguinal hernia which had been displaced into the cavity of the abdomen. No difficulty was experienced in relieving the constriction. The bowel was drawn out and examined, and was found to be dark-coloured, but not gangrenous. There was extensive congestion of the whole peritoneum. After relief of the constriction the abdominal wound was sewn up. The patient died the same day. The interest in this case centres in the fact that an old hernia sac had become retracted within the abdomen, and had there become the cause of strangulation of a portion of bowel. This case is a warning, therefore, to any who may be inclined to push a hernia sac back after a reduced hernia. It also adds another to the list of cases that warn us that we are inclined to delay abdominal section till the patient is too far reduced to benefit by the operation.

In the *Boston Medical and Surgical Journal* for 22nd February 1883 D. J. Collins Warren reports two cases of colotomy. The first was for malignant disease of the rectum. The colon was opened in the left groin. The patient made a good recovery, and was discharged from hospital one month after the operation. She survived in tolerable comfort for seven months. The operation was performed "with antiseptic precautions." These are not detailed, nor is it stated how they were to prevent septic infection from the contents of the colon. Notwithstanding these precautions there was "a slight erysipelatous blush lasting a few days."

The second case was that of an infant who was born without a connexion between the rectum and anus. Dr Warren performed colotomy in front, and selected the right side. A large amount of meconium was evacuated. The child survived the operation a fortnight, taking the breast well, but progressively emaciating. Dr Warren opened the right groin from a fanciful idea that the sigmoid flexure would be on that side. He attributes the unsuccessful result of the operation partly to his having opened into the cæcum instead of the sigmoid.

In the same journal is reported a very interesting and successful case of "Nephrotomy for Hydronephrosis," by A. T. Cabot, A.M., M.D., surgeon to the Children's Hospital. The patient was

a boy, aged 10, who, three months before admission to hospital, fell down stairs. He passed bloody urine for two or three days. Several weeks after the injury a swelling was noticed on the right side. This swelling was twice aspirated by a Dr Langmaid, when upwards of four ounces of a fluid resembling urine were drawn off. After a consultation it was agreed to adopt the method of treatment by incision and free drainage. The operation was performed by Dr Cabot. A vertical incision was made posteriorly "along the outer edge of the quadratus lumborum." The wall of the cyst was defined, secured to the skin, and freely opened. "Between two and three pints of amber-coloured fluid escaped. A double drainage-tube was inserted, and a Lister dressing applied, the operation having been done under spray, with all antiseptic precautions." The fluid contained albumen, blood-corpuscles, and hyaline casts, besides the normal constituents of urine, sp. gr. 1008. The child did well, the only unfavourable symptom being a smoky condition of the urine on the third day, which disappeared when chlorinated soda was substituted for the carbolic dressing; at the same time the fluid escaping from the wound coloured the dressings a bluish black. The amount of fluid steadily decreased, and in less than six weeks after the operation the tube was removed and the wound quickly closed. Six months afterwards he remained perfectly well. Dr Cabot, in his paper, discusses at length the different operations and lines of treatment recommended for hydronephrosis. We shall quote only one of his remarks:—"It is not uncommon experience that the urethra becomes again pervious when, by aspiration or puncture, the urine is drawn off and the pressure relieved. . . . We should therefore, I think, in hydronephrosis of recent origin, particularly when it depends on traumatic causes, expect that in a fair proportion of cases, after aspiration or incision in the loin, the relief from pressure will allow the ureter to recover its calibre."

The *New York Medical Record* for 27th January 1883 reports a wonderful case of recovery after severe injury of the abdominal walls. The patient was an Irish-American, aged 40, who was thrown from a locomotive over an embankment about 20 feet in height. The principal injuries sustained were two extensive ruptures of the abdominal wall, through one of which the stomach, and through the other intestine, protruded. The viscera were washed with a solution of chloride of soda and carefully replaced, when the two rents were carefully sewn up. The silk stitches were passed so as to include the peritoneum, and so to bring the serous surfaces together at the deeper part of the wound. The patient did well, and in three weeks was convalescent. Dr P. J. Higgins of Wilkesbarre, under whose care the patient was, attributes the rapid recovery to the mode of stitching, which insured a rapid union of the deeper part of the wounds. The operation of sewing up was performed half an hour after the accident.



## Part Fifth.

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### MEDICAL NEWS.

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AMERICAN LARYNGOLOGICAL ASSOCIATION.—The Philadelphia *Medical News*, in its issue of 26th May 1883, gives a lengthened report of the fifth annual congress of this Association, held in New York, under the presidency of Dr G. M. Lefferts. Among the more important subjects discussed were the Treatment of Laryngeal Phthisis, of Nasal Polypi, and of Naso-Pharyngeal Fibroma, the Photography of the Larynx, Congenital Tumours of the Larynx, and Reflex Phenomena due to Nasal Disease. In the discussion on laryngeal phthisis, the opinion was expressed that a limited number of cases might be cured by local and general treatment, and that topical applications gave most relief. These were best applied after the ulcer had been cleansed by a non-irritating alkaline spray, and morphine insufflated to relieve pain. Some of the members strongly recommended iodoform, either in powder or spray (ethereal solution), as a healing agent. Others preferred eucalyptol. As to the best method of removing polypi from the nose, views differed considerably. Dr Donaldson of Chicago declared in favour of the snare, with the use of a chromic acid paste to the base from which the polyp grew. Dr Jarvis naturally put faith in his own ecraseur, but believed it might be necessary to remove a piece of mucous membrane as well as the growth in order to prevent its recurrence. Dr Duncan thought the only method in which there was no recurrence was that advocated by Morrell Mackenzie and Prof. Gross, of removing a portion of the turbinated bone with the base of the polyp. Dr Rufus P. Lincoln presented a table of 74 operations by different surgeons for naso-pharyngeal fibroma. The galvano-cautery was shown, so far, to have given a greater percentage of successful results than any other method, and it had the further advantage of being simple, less dangerous, and leaving no deformity. Photographs of laryngeal and post-nasal lesions were exhibited by Dr T. R. French of Brooklyn. They were taken with the assistance of an expert amateur photographer. A hand-camera, which could be quickly placed in position, was used. The photographs were taken instantaneously by a drop-shutter, thus making it possible to photograph the larynx even if the parts were in motion. Only the parts reflected in the mirror were exposed, and the apparatus was so small that, if desirable, it could be used without the patient being aware of the object of the procedure. A paper by Dr Johnson of Chicago on five cases of Congenital Tumour of the Larynx gave rise to an interesting discussion on this subject. Dr Cohen referred to the frequency of "colds" in early life, and to the well-known fact that papillomata frequently followed the



catarrhal inflammations of the larynx in measles, croup, diphtheria, and whooping-cough, and he was rather inclined to believe that growths of this character that were really congenital were rare. He was opposed to the radical operation (thyrotomy) when not absolutely necessary, not so much on account of prospective injury to the voice, for that was a secondary matter to preserving the life of the patient, but he feared the cicatricial tissue of the divided skeleton of the larynx would materially interfere with its proper development at puberty. He also called attention to the fact indicated by the result of two operations in the paper, that there was a risk of pneumonia occurring after their performance. He had long recognised this risk in all operations upon the cervical region, even where the air-passage was not opened, and was inclined to attribute it in part to the lowered temperature to which the pneumogastric nerve and its ramifications were subjected. He therefore deemed it important that such operations should be performed in well-warmed apartments, and that great circumspection be used for several days after the operation. The reflex phenomena due to nasal disease were discussed by Dr Louis Elsberg, Dr Mackenzie, and others. Dr Elsberg said that although some of the phenomena of his cases were not reflex, most of them were, and he considered it of clinical advantage to bring them all before the Association. Twenty years ago he observed a case of chorea in a child which had followed exposure to cold, and was relieved by treatment of the coryza. Since then he had observed a number of other conditions which were attributable to nasal disease. These were principally (1) melancholia; (2) chorea; (3) reflex epilepsy; (4) neuralgia (especially supra-orbital headache and migraine); (5) gastric disturbances and diseased conditions of the upper digestive tract, as reflex pharyngitis, uvulitis, tonsillary enlargement; (6) uterine disorders and affections of the genito-urinary mucous membrane; (7) pain and disordered functions of the organs of sense, especially of smell and taste, but also of hearing and sight; (8) numerous affections of the extra-nasal respiratory tract and organs of voice, among which are especially prominent the various alterations of the speaking and singing voice, laryngeal cough, glottic spasm, and bronchial asthma. He recalled the fact that redness of the surface of the nose was often connected with nasal obstruction, and could be relieved by appropriate treatment of this condition. Among the curious instances of reflex disorder, he referred to the case of a man suffering from chronic nasal catarrh, who always had an attack of sneezing during coitus. Dr Mackenzie emphasized the importance and insisted on the great frequency of cough as a symptom of nasal disease. Clinical observation and experimental investigation had led him to the conclusion that there existed in the nose a well-defined and sensitive area, corresponding, in all probability, with that portion of membrane covering the turbinated corpora cavernosa, stimulation of which, either through a local pathological process, or

through an irritant introduced from without, was capable of producing an excitation which found its expression in a reflex act or a series of reflected phenomena. He was further of opinion that all parts of this area were not equally susceptible to irritation, the most sensitive spots being probably represented by those portions of the membrane which covered the inferior half of the lower turbinated bone and the erectile body on the septum immediately opposite. The susceptibility to irritation seemed to vary in different individuals, some being more readily acted on by irritants than others. Polypi, he thought, gave rise to reflex phenomena only when they arose from or infringed upon the sensitive area.

IN the February number of the *Annals of Anatomy and Surgery* is a series of papers of more than ordinary interest. The first is by Dr Briggs, Professor of Surgery in the University of Nashville, on trephining in fractures of the skull. He contends for the more frequent performance of the operation at an early stage of head injuries. We agree with him in his statement that "postponement to a period at which the secondary effects of the injury" have appeared has "already seriously compromised the result." "True conservatism, in my opinion," says he, "consists in the removal of the cause before it has had time to produce its damaging effects." He ignores the dangers from compression of the brain substance by depressed bone, or even by extravasated blood, that are so much dwelt upon generally by writers. He considers inflammatory action and its results the things to fear and to prevent, if necessary, by the removal of any fragments which might act as irritating agents. He would trephine, therefore, in depressed fracture, not to elevate the depressed portion, but to remove the fragments and spiculæ that, if left, would certainly light up an inflammatory process. The non-existence of an external wound he considers to be no contraindication. On the contrary, if the operation be performed antiseptically, a whole scalp is a great advantage.

The second article is by Dr Louis Bauer, Professor of Surgery in the St Louis College of Physicians and Surgeons, on rectovesical lithotomy. Dr Bauer mourns that his "zealous efforts to obtain favourable professional consideration for this method has (*sic*) been in vain." At the same time, he declares that the operation is "destined to hold high rank in lithotomy." The operation which he claims as his own is one by which the calculus is removed through an incision made from the rectum into the trigone of the bladder. His high opinion of his operation is materially changed, however, in the last page of his paper, where he says, "Since the preparation of the earlier portions of this paper the aspect of the question as to the relative superiority of the different methods of lithotomy has been changed decidedly." And then he goes on, in a spirit of self-forgetfulness, to com-



mend Petersen of Kiel, and to say (in italics), "*The future seems to belong to the suprapubic operation.*" Altogether the paper is a remarkable one.

The next paper, by Dr Markoe, Surgeon to the New York Hospital, is on Tripier's medio-tarsal amputation. Chopart's method has proved, as a rule, so unsatisfactory that various attempts have been made to improve it. Tripier of Lyons recommends the removal of a portion of the os calcis, so as to leave a level surface which can sustain the weight of the body. Dr Markoe highly extols this operation, and reports one case in which he performed it. Unfortunately for the credit of the operation, it was unsuccessful, and amputation in the leg had to be performed. It is quite evident that had Syme's advice been followed and Syme's operation been performed it would have been better for all parties concerned. Dr Markoe remembered, when too late, Mr Syme's recommendation not to amputate through the tarsus for disease, as the disease is almost certain to return in the bones left. The impression conveyed to our mind by reading Dr Markoe's paper is that neither Chopart's operation nor Tripier's modification of it comes up to Syme's amputation in giving either complete removal of disease or a useful stump.

The last paper in the *Annals* is from the pen of one of the editors, Dr Roswell Park of Chicago, on "Primary Antiseptic Occlusion and Treatment of Gunshot Wounds." Dr Park shows himself familiar with the literature and practice of the day. He advocates that gunshot injuries should be protected from all sources of injury (including germs) so soon as possible after infliction. Of course reference is made to the unfortunate result of the late President Garfield's case. We have read a great deal of what has been said on both sides on that subject, and we cannot but agree with Dr Park's opinion that the introduction of probes could have done nothing but harm. There is no doubt of this, that the bullet, which was subsequently found encapsuled, could not have been the cause of the suppuration and its unfortunate consequences. Dr Park follows the teaching of our own best authorities in regard to gunshot wounds, viz., if no immediate operation is necessary, then the less meddling with the injured part the better, and the sooner it is covered up from all sources of irritation the more likely are we to get primary union. There are sufficient cases now on record to show that gunshot wounds properly treated can heal by the first intention.

THE *Church of England Temperance Chronicle* for 20th January contains an article on "The Dietetic Use of Alcohol," by F. W. Parsons, L.R.C.P. London. Mr Parsons discusses various arguments in favour of the ordinary use of alcoholic drinks, such as "it is strengthening," "it assists digestion," etc., and has no difficulty in showing that the regular use (or perhaps we should say, abuse) of



these articles produces the contrary effect. We know of no persons who more frequently complain of indigestion than those who habitually indulge in alcoholics, and we constantly find that those who take wine to strengthen them continue to take it on account of their weakness. It certainly is a most remarkable thing that those who regularly take alcohol are those who most frequently require to take it, or think they require to take it, to aid digestion or to strengthen them. On the other hand, we know of those who have had the above experience, but who, after having been total abstainers for some years, have forgotten that they stood in need of such things altogether. Now we submit that this is not without analogy in other things. Alcohol undoubtedly ranks as a medicine, and a powerful one. It is also closely allied to a class of remedies which we know by experience breed a necessity for themselves. The persons who most demand and require medicines of almost any kind are those who are constantly taking medicines. They create a necessity for physic, or at any rate a craving for it; while those who believe in giving nature a chance require all the less of doctors' stuffs. Not that we disbelieve in remedies altogether, or believe in infinitesimals, which, by deluding people, encourage them to dose themselves constantly with nothing. On the contrary, we believe in the efficacy of remedies with which God in his goodness has supplied us, when appropriately administered, guided and guarded by the reason with which God has also gifted us. A substance which does not satisfy, but creates a necessity for itself, is clearly one which ought to be taken or administered only under careful restriction and guidance.

At the quarterly meeting of the British Medical Temperance Association in November last a most remarkable and interesting paper was read by Dr J. James Ridge, Hon. Secretary, from the pen of Dr T. D. Crothers, Superintendent of Walnut Lodge, Hartford, Conn., U.S.A. The paper was entitled, "Inebriety caused by Mental Injuries," and referred to those circumstances where drunkenness follows some shock to the system, such as sudden pecuniary loss, grief, or fright. Dr Crothers quoted many illustrative cases, as also did Dr Norman Ker, Dr Gray, Dr Charles R. Drysdale, and Dr Richardson, who took part in the discussion which followed. The important points brought out were mainly these,—First, that these cases are examples of disease, or at any rate derangement, of the nervous system, and therefore require special treatment, part of which is removal from the possibility of indulging in alcohol. Secondly, that there is a great danger in recommending or administering stimulants to those who are depressed from any of the above causes. And yet how often is this not done, and, doubtless, with a sincere desire to do good, misguided by ignorance! But such ignorance ought no longer to be pleaded. Who has not seen, or at least heard of instances where hopeless drunkenness has

been immediately preceded by some great loss or other shock to the nervous system? The question necessarily suggests itself, Why should this be? Why should a man in such circumstances take to drink and to drunkenness? All do not do so. We are all subject to suffer from affliction and loss. Sorrow is part of our portion in this world. But all who are afflicted do not become drunkards. Why is this? Wherein exists the difference? There must be some difference between those who fly to drink for comfort, and those who do not. We suggest the following:—

1. Many, doubtless, have previously formed a taste and liking for stimulants. How could they know that alcohol would lighten their grief except by having learned to like its narcotic action on their nervous system?

2. Many, also, may have had the dangerous substance thrust upon them by kind but unwise friends, and have also been encouraged to take what is recommended by the remembrance of a traditional belief in the efficacy of the drug.

3. There is also in almost all ranks of life the presence of alcoholic drinks at all times when persons are gathered together, whether for pleasure or mourning. The very presence of the drug suggests its employment, and its effects encourage its further indulgence.

4. There remains still the fact that there is a susceptibility to the action of alcohol, or a tendency to indulge in it to excess, after mental shock or injury. We know that in many, if not all, cases of head injury there remains a susceptibility to the action of alcohol; and it would seem that after mental shock there is a similar condition which in a number of instances leads to the formation of intemperate habits.

5. Lastly, there are in many cases such as those above referred to the condition of *heredity*, or the transmission by inheritance of a tendency to inebriety.

Now, while the last two conditions are irremediable, the former three are preventible. And we submit for the consideration of those of our readers who believe in prevention and are philanthropic in their aims, that these dangers to some of our weaker brethren should be removed by the encouragement of total abstinence, the discouragement of the frequent employment of alcoholics as a beverage, and their disuse in connexion with funerals and such like gatherings.

Dr Crothers's paper, with the discussion following its reading, is published in full in the *Medical Temperance Journal* for January 1883. We would strongly recommend the perusal to our readers.

MR BERNARD, Surgeon to the Liverpool Lock Hospital, gives an analysis of the situations in the male in which he found chancres. Inner surface of prepuce 57, furrow 53, corona 31. Six were at



the meatus, one in the urethra. There were in all 120 cases.—*Liverpool Medical Journal.*

INTERNATIONAL EXHIBITION AT NICE, 1883-4.—At this exhibition, which is to be opened in December, it is proposed to have a Sanitary and Medical Section, and engineers, architects, manufacturers of sanitary apparatus, pharmacutists, and makers of surgical instruments, are invited to co-operate. The official agents for Great Britain are Messrs J. M. Johnson & Sons, 1 Castle Street, Holborn, London. The following is a classification of the objects proposed to be exhibited:—*Distribution and Purification of Water for Domestic Use.*—Modes of water supply, filtering, purification, distribution to dwellings, models and plans having special reference to questions of hygiene. *House Drainage and Sewerage.*—(a) Models and plans of sewers. (b) Different systems of emptying cesspools, etc.; earth closets, water closets, etc.; urinals, sinks, etc., etc. (c) Apparatus for baths and hydrotherapeutics; public baths. (d) Various kinds of washing apparatus; public washhouses. *Hygiene of Public Establishments, of Houses, of Ships.*—(a) Architecture of hospitals, of barracks, and of private houses; designs and plans for hotels, suitable for the reception of delicate persons, and intended to secure quiet, good lighting, ventilation, equable temperature, etc. (b) Different appliances for hospital wards, and for the sick room. (c) Instruments and apparatus for detecting adulteration of articles of food and drink. (d) Demography; medical statistics. *Pharmaceutical Preparations.*—Dietetic and pharmaceutical preparations; disinfectants. *Mineral Waters.*—Mineral waters, and everything relating to watering places, such as architecture of bath-houses, arrangements of baths, etc., etc. *Medical and Surgical Instruments and Appliances.*—(a) Instruments and appliances for anatomical and histological research. (b) Instruments and appliances used in investigation of disease. (c) Surgical instruments arranged according to their several purposes, as for amputation, resections, etc.; special instruments, as dental, eye, and ear instruments; obstetric instruments, and those used in electrotherapeutics; pouches, and instrument and medicine cases, for military and naval surgeons. *Veterinary Medicine.*—Special necessities, instruments and appliances needed in veterinary medicine and surgery; horse shoes. *Hydrotherapeutics. Medical Gymnastics.*—Hydrotherapeutics. Orthopædic apparatus; gymnastics as applied to medicine and hygiene. *Life Saving Apparatus, Ambulances, etc.*—Instruments and appliances for accidents; naval and military surgery; civil and military ambulances. *Special Treatises.*—Works bearing on the different above-mentioned groups. *Meteorology applied to Climatology.*—Meteorological instruments. *Meteorological Observations.*—(a) Meteorological observations and stations. (b) Summary of observations; curves of temperature, and pressure from different stations. *Special Treatises; Plans; Charts.*—Works published on meteorology generally.



ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine on 4th and subsequent days of July 1883, and were admitted L.R.C.P. Ed.:—Robert Smailes, Leeds; Samuel Aspinall, Birmingham; Wm. Knibb Rix, Bradford; Thos. Rhodes, Edinburgh; Truman Wallace Duncombe, Ontario, Canada; John Griffiths, Lincoln; Reuben Levi, Canada; Arthur Henry Gordon, London; Henry Heath Parsloe, Chippenham, Wilts; Edward Chas. Hynes, Nottingham; Chas. Edward Berkeley Duncombe, Ontario, Canada; Chas. Batten Gracie, Liverpool; Geo. Fredk. Phillipot, Norton, near Stourbridge; Edgar Milne Hewish, Toronto, Canada; James Henry McCullough, Ontario, Canada; James Milton Cotton, Ontario, Canada; John Alex. McNaughton, Ontario, Canada; Arthur Edward Dodson, London; Frank Herbert Mayo, Leeds; Wm. Whittington Baxter, Swansea; Fredk. Wm. Alexander, Croydon; John Percy Holyoake, Stourbridge.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held in the month of July 1883, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Wm. Bradley, London; James Maher, Ballinasloe, Ireland; John N. Hawtin, Leeds; John Edmund Hutchings Stephens, Cornwall; Herbert Hartley, Malton, Yorkshire; Thomas Williams, Anglesea; Charles Williams, Cornwall; William Henry Miller, Canary Islands; John Joseph Butler Adare, Bury; Thomas Macdonell Parr, Co. Down.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Surgery at the sittings held in July 1883, and were admitted L.R.C.S. Ed.:—Albert Bleckley Clarke, Chattins, Cambs; Joseph Harrison, Bradford; Archibald James Alexander Campbell, Perth; William Frederick Arthur Walker, Hereford; William Houston Low, Kilbarnie, Ayrshire.

UNIVERSITY OF EDINBURGH.—MEDICAL DEGREES EXAMINATION.—The following gentlemen have passed the final professional examination for graduation in Medicine and Surgery:—Augustus Whitehorn Addinsell, Birmingham; Alfred Aikman, St Andrews; Charles Aitken, Teignmouth; George Forbes Alexander, Cheltenham; Robert Thomas Allan, Duns; Edwin Baily, Edinburgh; Percy John Baily, Edinburgh; John William Ballantyne, Windermere; Thomas Lane Bancroft, Queensland; Theodore Hugh Barker, Edinburgh; William Henry Barrett, Edinburgh; John Barrie, Dalkeith; Hunter Jackson Barron, London; David George Bennet, B.A., New Brunswick, Canada; Patrick Hunter Bett, Aberfeldy; William Bird, Edinburgh; Robert Blair, Hamilton; Thomson Bonar, Edinburgh; Charnchandra Bose, Edinburgh; Edmund Kemp Bourne, Kidderminster; Alexander McRae Bremner, Edinburgh; George Thomas Broatch, Edinburgh; Charles Brown, Dunblane; John Henry Brown, Yorkshire; Matthew Bruce, Edinburgh; Andrew Crichton Buist, Edinburgh; Thomas Marshall Buncle, Arbroath; John Newton Burns, Edinburgh; Walter Burns, Ayr; Henry Paul Butterworth, Rochdale; George Schuyler Cardew, Bath; William Robinson Carter, Blackpool; James Matthew Caw, Cupar; Edwin Albert Chill, Bassein, Burmah; Michael Clark, Northumberland; Ronald Clark, Port-Glasgow; Arthur Henry Weiss Clemow, Liverpool; Dirk Cloete, Cape Town; Charles Newberry Cobbett, Edinburgh; Horace Cocks, Norfolk; Sidney Alfred Comber, London; Francis Gillies Conner, Edinburgh; William Cotton, M.A., Edinburgh; James Craig, Castle-Douglas; William Laing Cullen, Islay; William Cumming, Montrose; James Dalgleish, Hawick; Thomas Kennedy Dalziel, Dumfries; Daniel Rees Davies, South Wales; John Davies, Carmarthen; William Hugo Davies, Dublin; Thomas Harrison Davison, Newburn-on-Tyne; Archibald Telford Dochard, Gourock; Archibald Donald, M.A., Edinburgh; David Gilbert Donaldson, Methven; Edwin Douglas, Edinburgh; Herbert Johnson Dring, London; Alexander Peters Drummond, Edinburgh; William Duff, Burntisland; George Duncan, Yarmouth; Thomas Edward Dyson, Bradford; David Griffith Evans, Anglesey; George Fisher, Sanday, Orkney; Thomas Johnson Fletcher, Cheshire; William Simpson Flett, Edinburgh; Boston Elphinston Fordyce, Edinburgh; William Henry Francis, Guayaquin, Chili; Alexander Fraser, Strathpeffer; Alexander George Fraser, M.A., Edinburgh; William Duncan Fraser, Denbigh; Arthur Fuller, Gloucestershire; Matthew Henry Gardiner, M.A., Campbeltown; Walter Chancellor Garman, Wednesbury; Robert Ritchie Giddings, Edinburgh; Frank William Albion Godfrey, Melbourne; Robert Gordon, Lichfield; William Bruce Gowans, Perth; Laurence Ramsay Gray, Musselburgh; Vernon John Greenhough, B.A., Derbyshire; Francis Walter Grierson, Dumfries; Matthew Wilkins Gutteridge, London; Clements David Grierson Hailes, Weston-super-Mare; John Scott Haldane, M.A., Auchterarder; Francis James Hall, Mauritius; Frederick William George Hall, Allahabad,

India; Patrick Brodie Handyside, Drem; James Heath, Edinburgh; Edward Bate-man Hector, Montrose; Robert Dundas Helm, Leith; John Henderson, M.A., Armagh; George Hewlett, Plymouth; John Stonely Hill, Audlem; Thomas Knight Hill, Lancashire; John Hoyle, Yorkshire; Dirk de vos Hugo, Cape Colony; John Hume, Edinburgh; James Hunter, Glasgow; William Hunter, Birkenhead; John Hutson, B.A., Barbadoes, W.I.; Robert Inch, Abington; George Irving, M.A., Lockerbie; John Lowthian Jackson, Great Grimsby; Adam Jameson, Edinburgh; Samuel Johnson, Bengal; Charles Hampson Jones, Baltimore, India; Francis W. B. Jones, Herefordshire; John Gregory Jordan, Edinburgh; John Edward Harry Kelso, Edinburgh; Wilfred Vincent Miller Koch, Colombo, Ceylon; John Spence Law, Forfar; Thomas Spencer Lawry, Auckland, New Zealand; William Murray Leslie, Ross-shire; Joseph Alexandre Lestrade, St Lucia; Henry James Ley, Devon; Charles Louis Lightfoot, Newcastle-on-Tyne; Henry Sanderson Lloyd, Adelaide; Robert Thomas Lorraine, Dumfriesshire; John Alfred Loudon, Coventry; Thomas Malcolm Lyon, Edinburgh; Herbert Macandrew, Dunedin, New Zealand; John Cowan McClew, Portpatrick; Bouverie Francis Primrose Macdonald, Edinburgh; John Macdonald, Tobermory, Argyllshire; William Fraser Macdonald, Old Seone; Allan Macfadyen, Edinburgh; Donald Macgregor, M.A., Unst, Shetland; John Archibald McIntyre, Edinburgh; Francis Alphonsus Maciver, Edinburgh; George Mackay, Inverness; Archibald Mackenzie, Natal, South Africa; John Hutton Mackenzie, M.A., Dumfries; Robert Mackenzie, Edinburgh; Frank Irvine Mackinnon, Edinburgh; John McLachlan, Edinburgh; Charles George MacLagan, Berwick-on-Tweed; James Alexander McLaren, Edinburgh; John Shaw McLaren, M.A., Edinburgh; Andrew MacLennan, Glen Urquhart, Inverness; James McLeod, B.A., Sydney; James Macpherson, Invercargill, New Zealand; William Aberdein Malcolm, Dundee; Augustus Alexander Matheson, Edinburgh; Farquhar William Matheson, Edinburgh; Duncan Menzies, M.A., Aberfeldy; Gustave Michael, Edinburgh; Alexander Cameron Millar, Fort-William; Ralph Smith Miller, Shotts; William Henry Miller, Edinburgh; David Milligan, Edinburgh; William Henry Owen Mills, Cape Town; James Milne, Edinburgh; Robert Peter Mitchell, Edinburgh; Peter de Villiers Moll, Paarl, South Africa; Arthur Rowley Moody, Edinburgh; Robert James Anderson Moore, Isle of Man; Benjamin Michael Moorhouse, Canterbury, New Zealand; Upendra Nath Mukerji, Gorepay, India; Andrew Watson Munro, Tain; Alexander Brown Murdoch, Elgin; James Adam Johnston Murray, Edinburgh; Andrew Scott Myrtle, Harrogate; John Headley Neale, Leicester; Andrew Murray Neethling, Edinburgh; George Robert Nelson, Burlington Quay; Benjamin Hugh Nicholson, Whithorn; Gustavus Paul Nicolet, Spa, Belgium; Gerrit Nieuwoudt, B.A., Cape of Good Hope; John Tawse Nisbet, Edinburgh; John Orr, Edinburgh; George Dall Orrock, Edinburgh; Owen Richard Pughe Owen, Dol-gelley, North Wales; George Park, M.A., Dumfriesshire; Alexander Gordon Paterson, M.A., Edinburgh; Andrew Melville Paterson, Manchester; Donald Paterson, Inverness; James Paterson, Cumberland; Walter Petter, Barnstaple; William Ernest Porter, Yorkshire; Alexander William Gordon Price, Betul, India; William Locking Price, Edinburgh; Joseph Priestley, B.A., Edinburgh; Adam Scott Purves, Thurso; George More Reid, London; James Black Roberts, Aber-ystwyth, Wales; James Stirling Robertson, M.A., Edinburgh; Thomas Murray Robertson, Edinburgh; Arthur Robinson, Manchester; Chisholm Ross, Inverell, New South Wales; Frank Rothera, Nottingham; Henry Davis Rowan, Edinburgh; Mark Anthony Savage, Consett, Co. Durham; Harry Scott, Edinburgh; Stanley Scott, Kelso; William Duncan Scott, B.A., Selkirk; Rajanikanta Sen, Balahara, Bengal; George Franklin Shiels, San Francisco; Lloyd Grant Smith, Llangollen, North Wales; Arthur Edward Cecil Spence, Allahabad, India; Alexander Stables, Nairn; Arthur Cowell Stark, Edinburgh; John Neil Stark, Glasgow; John Steell, Edinburgh; Hamilton Stewart, Edinburgh; Arthur Jallard Stiles, Lincolnshire; William Malcolm Sturrock, Cupar; Allam Cuthbertson Sym, Edinburgh; George Peter Taylor, Lancashire; John Thomason, Kelso; Andrew Thomson, Jedburgh; Daniel Gibson Pearse Thomson, Edinburgh; George Thomson, Norham-on-Tweed; Richard Vassie, Lanark; John Walther, Oban; Allan Ogier Ward, Sussex; Edward Henry Warner, Edinburgh; Walter Frederick Rodolph de Watteville, Berne; Alexander Oswald Coward Watson, Dumbartonshire; George de Bourboulon Watson, Edinburgh; James Bates Wilkinson, Hunts; John Williamson, Edinburgh; Henry Arnot Wilson, Bo'ness; James Thomas Wilson, Thornhill; Samuel Harry Wilson, Ramsgate; Theodore Stacey Wilson, B.Sc., Birmingham; Edwin Aubrey Witchell, Stroud; Alexander John Wood, Falkland; George Benington Wood, Cheshire; Peter Yates, Heaton, near Bolton; Arthur Charles Younan, Edinburgh.



## OBITUARY.

## PATRICK CRUIKSHANK HOUSTON, M.A., M.D.

PATRICK CRUIKSHANK HOUSTON, M.A., M.D., died at Kirkcaldy on the morning of the 16th July.

On the forenoon of Saturday the 14th he visited his patients as usual, and he was preparing to make his round of afternoon visits when he became alarmingly ill. His friends, Drs Dewar and Gordon, were immediately sent for, and were in constant attendance on him till the end came. On Sunday morning it was thought that there was an improvement in his condition, but towards evening he became worse, and died about four o'clock on Monday morning, after an illness which had lasted only 38 hours. The cause of death was peritonitis.

For a year or two Dr Houston had suffered from occasional attacks of painful dyspepsia, but he scarcely ever allowed these to interfere with his work. Lately, however, he became conscious of the need of rest, and had made arrangements to take a holiday, which was to begin on the Thursday following the day of his death. Before that Thursday came the work of his life was over, and he had passed to his everlasting rest. He had "no creeping progress to the grave;" he died suddenly and in harness, discharging faithfully to the very end all the duties that fall to a physician in large practice.

Dr Houston was born in Strathspey in March 1836. He graduated in arts in the University of Aberdeen in 1855, and afterwards studied medicine in Edinburgh and Paris, taking his degree in 1862.

He settled in Grantown in 1863, and had a large country practice there, gaining the confidence and esteem of the people by his professional abilities and his high character as a gentleman.

In 1870, on the death of Dr Stoddart, he removed to Kirkcaldy. Almost from the first his practice there was large, but it steadily increased from year to year, and at the time of his death is said to have been the most extensive in the district. As in Grantown, so in Kirkcaldy, his professional attainments and his trustworthiness and benevolence gained for him the affectionate respect not only of his patients but of the whole community,

Yarmouth married in 1869 a daughter of the late Sheriff Shank Cook, George F. and a family of six children survive him.

Simpson Flea buried in the churchyard of Cromdale, in Strathspey, Francis, Guay  
M.A., Edinburgh town patients following him to his grave, and the shire; Matthew Ellage being all shut. But in Kirkcaldy also there Wednesday; Robert al procession from his house to the railway station, Melbourne; Robert C  
Ramsay Gray, Musselkier carrying the coffin shoulder high as a last Walter Grierson, Dum their physician and friend.  
David Grierson Hailes, V.  
arder; Francis James Hall,



## Part First.

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### ORIGINAL COMMUNICATIONS.

#### I.—UNIVERSITY OF EDINBURGH: GRADUATION ADDRESS.

*Delivered 1st August 1883.*

By ALEXANDER DICKSON, M.D., Professor of Botany.

FELLOW-GRADUATES IN MEDICINE, — On behalf of the University and of the Medical Faculty—whose humble instrument I am on the present occasion—I most warmly congratulate you on the position to which you have this day attained. As to myself personally, I have a special pleasure in doing this, from the fact that I have now been sufficiently long in my present chair to have the gratification of seeing among you a large number of old pupils, with whom I have enjoyed much pleasant intercourse.

To-day, you have had opened to you the portals of one of the noblest professions it can fall to any man to pursue;—a profession where it is possible to follow in the footsteps of the Great Example of Humanity more closely, perhaps, than in any other, if we except the sacred calling. The world is now before you, with its difficulties, trials, and temptations, no doubt,—but also with all its opportunities for good and successful work.

There is, indeed, much on which to congratulate you. In the heyday of youth, in the flush of success, conscious of your strength, and surrounded and encouraged, as so many of you are, by admiring friends, you have vistas of a brilliant career opened up before you. Everything seems possible; and, in truth, with the heart kept sound, with the head kept clear, and with steady determination, almost everything *is* possible. And when all around you seems transfigured in the general radiance, I may be permitted to hope that even your examiners, erewhile objects of but doubtful regard, may now appear in a somewhat pleasanter light.

Amid all this exultation, however, there are some things that tend at least to soften the brilliance of the picture. Though in one sense you have succeeded in casting behind you a considerable burden of care and anxiety, you are entering on a life of new cares, new anxieties, and new responsibilities. And while you advance hopefully and joyfully to your future career, you cannot but feel the transition from your light-hearted undergraduate existence—

light-hearted, even in spite of examinations—to the more serious responsibilities of professional life, and cannot look forward without a pang to separation—it may be for life—from fellow-students with whom you have had the closest and warmest relations of intimacy and friendship.

### MEDICAL REFORM.

The subject to which I mean for a short time to direct your attention is what is called Medical Reform; with special reference to a measure at present before Parliament—the Medical Act Amendment Bill. As most of you are aware, this bill has passed the House of Lords, and now awaits consideration by the Commons. As matters stand, however, the chances of the measure at this time becoming law seem infinitesimal,—from the advanced period of the Parliamentary Session, and from Her Majesty's Government being overwhelmed by the embarrassed condition of public business.

The abandonment of the measure will, in my opinion, be a subject for congratulation, rather than for regret. The Government, the Country, and the Medical Authorities will have time for consideration; and I feel confident that the more the subject is considered, the more clearly it will appear that the arrangements proposed in the bill are quite unnecessary.

In entering on the subject of medical reform, I would, in the first place, caution you against being misled or carried away by any misconception as to the meaning of the word *Reform*. Reform, in its strict signification, is simply a reconstructive change, which in the abstract may, of course, be either for the better or for the worse. And from this it naturally follows that opinions may and *do* often widely diverge as to the merits of any proposed reform. In those whose tendency is to view things in general with discontent, or in whom the love of novelty or variety is strongly developed, there is a disposition to hail any change as necessarily beneficial; while in those of happier mental constitution, or less Athenian temperament, there may be a disposition to regard all change, indiscriminately, with suspicion. I need not say that either of these extremes is to be avoided. In the latter case, we should have all the evils of stagnation; we should never have remedy of original or inherent defects; and often we should have the stereotyping of what may in its origin have been good and sufficient, but, from altered external conditions, is now become altogether unsuitable, or even injurious. In the former case, on the other hand, we should have all the dangers of hasty and ill-considered change, with results even more disastrous than those of stagnation, and with a progress that is worse than none. The caution I have just given seems to me all the more necessary from the circumstance that in ordinary practice the word Reform is usually employed in a good sense, just as the words *Reformation* and (in theology) *Convert* are usually



employed in a good sense. But you must all be aware that what in this country we are in the habit of calling *the Reformation* (using the word in a *good* sense) is regarded by the greater part of Christendom as an unmixed evil; while as regards the term *Convert* we have had divergence of opinion almost ludicrously exhibited, by the invention of the alternative expression *Pervert*, or of the more colourless and charitable, though very unclassical form, of "*'Vert*."

You must not, however, from these remarks suppose that there is anything political underlying this bill. Successive Governments, Conservative as well as Liberal, have attempted to pass bills more or less resembling the present one, but as yet without success.

### THE MEDICAL ACT OF 1858.

The Medical Act of 1858—which it is now sought to amend—provided for the establishment of a "*General Council of Medical Education and Registration*," to which was entrusted the power of supervising the course of Medical Education and Examination required by the different Licensing Bodies, and, if they should see fit, of reporting thereon to the Privy Council. To this General Council was further entrusted the drawing up and keeping of a *Register* of persons in the United Kingdom legally qualified to practise Medicine. And, lastly, the Council was entrusted with the duty of drawing up and publishing, and, from time to time, revising and republishing a *British Pharmacopœia*. Beyond the framing and keeping of the Medical Register and the preparation of the *Pharmacopœia*, the power of the Council is very much limited to the inspection of examinations, and to making representations to the Privy Council if there seems reason to believe that the course of study or examination required by any of the licensing bodies is insufficient. The General Council consists of twenty-three members. Of these, seventeen are chosen by the medical authorities, and six by the Crown. Of those chosen by the Medical Authorities, seven are from England, five from Scotland, and five from Ireland; while of those chosen by the Crown, four are appointed for England, one for Scotland, and one for Ireland. Besides the obligatory provisions of this Act—of which the most important is the establishment of the General Council—there is also a permissive one, to enable any two or more of the Licensing Authorities, under direction and sanction of the Council, to conjoin their examinations for registrable qualification.

It cannot be doubted that this Act of 1858 was a very important step in advance of the previously existing state of matters. The power entrusted to the General Council of supervising the education and examinations required by the Licensing Bodies, and of virtually checking (by representation to the Privy Council) any undue lowering of standard in either of these departments, is of the highest importance; while the establish-



ment of a Register from which all unqualified persons are excluded is an invaluable protection to the Public. But, on the other hand, it must be admitted that the measure dealt in a timid and inefficient manner with an acknowledged evil,—that of what are termed *incomplete* (or *half-*) qualifications. To explain my meaning, I may refer to the case of England, where the examination of the Royal College of Surgeons is incomplete in Medicine and Midwifery, that of the Royal College of Physicians is incomplete in Surgery, and that of the Society of Apothecaries does not include Surgery at all; and where yet, as matters stand, the Licence of any one of these Bodies enables its holder to act as a *General Practitioner*! And even as to our Scottish Corporations, though technically there is exacted evidence of complete professional accomplishment, it is still to be wished that they would, in the earlier subjects of Anatomy, Physiology, and Chemistry, either in all cases themselves conduct the examinations, or at least so remodel their regulations as to avoid the acceptance of examinations not clearly up to the level of their own. The Act of 1858, instead of dealing directly with the important question of incomplete qualifications, contented itself with the permissive clause to which I have referred; under which, as I have said, Licensing Authorities might conjoin their examinations.

Had the General Council diligently and faithfully performed their duties in the supervision of Medical Education and Examination, and had the Medical and Surgical Corporations, by taking advantage of the permissive clause of the Act, made their examinations complete, we should probably have had no further trouble with proposals of Medical Legislation. But, for reasons best known to themselves, the Council have confined their supervision of the examinations to visitation at the rarest intervals; while the sole outcome of the permissive clause of the Act has been the partial conjunction of examinations by our Scottish Corporations, for the granting of what is called the Double Qualification.

#### THE MEDICAL ACT AMENDMENT BILL, 1883.

In entering on the consideration of the measure now before Parliament, I do not intend to go minutely into the history of the numerous bills that have from time to time been introduced to amend the Act of 1858. Those interested will find a very clear account of the various agitations for legislation, and of the bills resulting therefrom, in a paper by Mr John White, secretary to the Royal Commission on the Medical Acts, entitled, "Statement in regard to recent Attempts at Medical Reform,"—a valuable document, but one so disfigured by party bias that it is matter for surprise that the Royal Commissioners should have allowed it to appear, as it did, as an Appendix to their Report.

The practical failure of the Council as supervisors of the examinations, and the continued existence of incomplete though registrable

qualifications, are ostensibly the most important of the reasons that have been urged for the amendment of the Act of 1858. But the characteristic form which the demands for legislation have always assumed when embodied in Parliamentary Bills, significantly points to another though unacknowledged factor underlying the agitation, viz., jealousy on the part of the London Hospital-Schools. Till quite recently (when the Victoria University of Manchester became empowered to grant Medical Degrees) England had no really important medical school possessing the privilege of granting a Licence to practise. The Universities of Oxford, Cambridge, and Durham, no doubt, could grant Licences to practise, but their Medical Schools are so small that they may be left out of consideration. By far the greater part of the medical educational machinery in England is connected with the London Hospital-Schools; and it appears to have been felt by these schools—perhaps not unnaturally—that they were somewhat undeservedly at a disadvantage in competing with other Institutions, such as the Universities of Scotland and Ireland, which possessed the privilege of granting Licences to practise. Instead, however, of seeking to amend their position by the establishment of a Metropolitan *Teaching* University, to which, as my colleague Professor Turner has expressed it, “the Hospitals would have been adjuncts as places of clinical study,” they seem to have taken the less generous course (to say the least), and persistently attempted to reduce the universities to their own level, by depriving them of their licensing powers. And accordingly we have had, in all the important medical bills,—mainly brought forward and supported by the very powerful Parliamentary influence of the Medical Profession in London,—proposals for the formation in each of the three Divisions of the United Kingdom of a single Conjoint Board, with exclusive power of conferring a registrable Licence,—involving, of course, abolition of the licensing powers of the existing Authorities. And to this general description the Amendment Bill of the present session is no exception.

The most important change proposed by the new Bill is that under it the Diplomas of the present Authorities would no longer admit to the Medical Register; the right of such admission being now made to depend on a Candidate having passed a Final Examination in Medicine, Surgery, and Midwifery conducted by Examiners appointed by a new Body called a *Medical Board*. For each of the three Divisions of the United Kingdom there would be a separate Medical Board. The English Board would consist of two Members for each of the three Universities of Oxford, Cambridge, and London; one for each of the two Universities of Durham and Manchester; and four for each of the two Royal Colleges. The Scottish Board would consist of three Members for the University of Edinburgh; two for each of the two Universities of Glasgow and Aberdeen; one for the University of St Andrews; and one for each of the three Corporations. And the Irish Board would consist of



three Members for each of the two Universities; two for the College of Physicians; and four for the College of Surgeons.

Among the functions of a Medical Board would be:—

(1.) To prepare a scheme or schemes for the institution and conducting of the Final Examinations, and for the determination of what Schools, Curricula, and Previous Examinations should be recognised as sufficient.

(2.) To ascertain from time to time the sufficiency of the Education and Previous Examinations.

(3.) To alter the scheme or schemes according as the Board might from time to time see fit.

In these matters, however, the powers of the Medical Boards would be limited by the proviso that no scheme or alteration of one should take effect till after it had been approved of by the Medical Council (which I shall presently describe), and, further, confirmed by the Privy Council. At the conclusion of each Final Examination the Medical Board concerned would certify to the Medical Council the persons that had passed the examination; and these persons would thereby become entitled to registration as Medical Practitioners.

Instead of the present "*General Council*," elected by the votes of the various Universities and Corporations and by the Crown, there would now be a new Council, called the "*Medical Council*," composed of Members appointed as follows, viz., six by the Crown, two by Practitioners in England, one by Practitioners in Scotland, one by Practitioners in Ireland, four by the English Medical Board, and two by each of the two other Medical Boards.

Between the functions and powers of this new "*Medical Council*" and those of the present "*General Council*" the chief differences would be:—

(1.) Whereas the present council has specially the duty of looking after the action of the present Licensing Authorities (viz., the Universities and Corporations), the *new* Council, on the contrary, would specially have the duty of looking after the new Medical Boards.

(2.) Whereas the present Council can, for correction of abuses in the action of the Universities and Corporations, only make *representations* to the Privy Council, leaving further action to the Privy Council itself, the *new* Council, on the contrary, would be able at once to issue to the Medical Boards *orders* having the force of law.

That this bill, if passed into law, would secure that no one should go on the register without having been successfully subjected to a Standard Minimum of Education and Examination, there can be no doubt. But it appears to me, as it does to many others, that the exclusion of unqualified or imperfectly qualified persons from the Register may be effected by far simpler means; that the practical difficulties of the scheme for Divisional Boards and their examinations are so great as to be almost insurmountable; and that great hardship would be inflicted on Candidates by the imposition of a heavy tax for an examination necessitated only by the failure



of the General Council to perform its statutory duty in the supervision of the examinations of the different Licensing Bodies.

As regards the practical difficulties of the scheme for Divisional Boards, there is, in the first place, the probability, if not certainty, of such friction between the different interests represented on any such Board as to make harmonious action impossible, and lead to a state of matters so intolerable that all concerned would gladly hail a return to the previous conditions. That this would be the case must, I think, be evident to all who have noted the strength of feeling already evinced on this subject by some of our prominent professional leaders. Secondly, it would be very difficult to find examiners whose appointment would not offend some important section of medical opinion. And, lastly, the strain on our Hospitals, for the additional Clinical Examinations required, would be so great, that it may seriously be doubted whether our Hospital Managers would not feel it their duty to interpose.

That some legislation, however, is needed, is, I think, generally admitted. Partial or incomplete qualifications must be replaced by complete ones; and the General Council should be *enjoined*, instead of simply empowered, to supervise the examinations. As to this, I would submit that, instead of the cumbrous, unworkable, and costly machinery proposed by the Bill, the following scheme should be adopted, as simply and efficiently fulfilling all requirements:—

(1.) *In each Division of the United Kingdom the Medical and Surgical Corporations should combine for the purpose of granting registrable qualifications.*

(2.) *The General Council should be enjoined to institute a system of more frequent Visitation of examinations.*

(3.) *It should be imperative that all Examination Papers of Candidates who have passed be preserved in accessible form for such period as the Council may determine.*

As to combination of the Medical and Surgical Corporations, there would hardly be much difficulty. The Scottish Corporations have already voluntarily combined their examinations to a large extent, and there would probably be no strong opposition to similar combinations in England and Ireland.

With reference to Visitation and Supervision of examinations by the Council, it might almost be supposed that special legislation would be superfluous, seeing that the Council is probably already possessed of all the necessary powers.

The Preservation of the Examination-Papers for possible future inspection by the Council Visitors would, it seems to me, be one of the most efficient checks on any downward tendency in an Examining Body. For example, were Visitors, on any occasion, to find perplexing difference of rejection-percentages between visited and unvisited examinations, they would, by referring to the papers, readily ascertain whether this difference depended on the Candidates themselves, or on the presence or absence of Visitors.

Failing the acceptance of the scheme I have just sketched, which, however, I would strongly recommend to all interested in this question, as, in my opinion, the best one, some such plan as that proposed by Professor Huxley, one of the Royal Commissioners, might be suggested as the next preferable. Under such a scheme the principal features, besides combination of the Corporations, should be:—

1. Each of the Universities and each Combination of Corporations should retain the right to grant Registrable Licences.

2. The State should, for control of the examinations of each Licensing Body or Combination of Bodies, appoint *Coadjutor-Examiners* to act along with the ordinary examiners in conducting the examinations for Licence, these Coadjutor-Examiners having power, by a vote given by themselves alone, to *prevent* the licensing of any Candidate they might consider to have failed in his examination, but having no power to vote for the *granting* of any Licence. In this way the various bodies would be prevented from passing Candidates below a certain minimum of excellence, but would not be compelled to lower any higher standard they might have in view.

Professor Huxley's proposal is in the following words:—"That if any Examining Body satisfies the Medical Council (or other State Authority) that it requires full and efficient instruction and examination in the three branches of Medicine, Surgery, and Midwifery, and if it admits a certain number of Coadjutor-Examiners appointed by the state authority, the certificate of that Examining Body shall give admission to the Register." As to whether the appointment of the Coadjutor-Examiners should be entrusted to the Council or to some other State Authority, Professor Huxley offers no opinion. But it seems to me that the duty in question would not be so well discharged by the Council as by some single State Official. For I believe that a more independent opinion might be expected from such an Official, acting, as he would do, under a simple and clear sense of public duty, than from a body like the Council, whose very constitution involves a complicated balancing of conflicting interests.

#### CONCLUSION.

In the last place, I would offer a few words of counsel as to your future. You must never forget that your studies, instead of being now ended, are, in truth, only beginning; that the scientific training you have had from the hands of others is merely the commencement of what must be carried on by yourselves. In many departments it may, from professional distractions, be impossible to pursue special studies in detail; yet the habits acquired in the earlier part of your career, of closely observing, comparing, and reasoning on natural phenomena, are indispensable, and must be continuously cultivated. For it is on your power of intelligent



observation and comparison, and what may be called your scientific insight, that your success as practitioners will mainly depend. Above all, you must never forget that your profession is one which demands—more, almost, than any other—the character and conduct of a Gentleman, in the highest sense of the term. You must cultivate unselfishness, courtesy, and the faculty of delicate perception. You must ever be ready to make allowance for others, but never fear to express your opinion where it may be your duty to do so. I have referred to your profession as a noble one; never lose sight of the motto, "*Noblesse oblige*." Lastly, in a profession whose proverbial reproach is a tendency to differ with unnecessary vehemence and acrimony, it is, in any difference of opinion with your fellows, essential to assure yourselves of freedom from professional jealousy, or any other motive that will not bear the closest inspection; and, above all, to cultivate amiability of disposition. And in support of this recommendation I would close these remarks with a quotation from an old writer, "the ever-memorable Mr John Hales of Eton." Speaking of this quality of amiability, which he calls "goodness," he says, "Goodness, of all the attributes by which a man may be styled, hath chief place and sovereignty. Goodness, I say:—not that metaphysical conceit which we dispute of in our schools, . . . but that which the common sort of men do usually understand when they call a man good; by which is meant nothing else but a soft, and sweet, and flexible disposition. For all other excellencies and eminent qualities which raise in the minds of men some opinion and conceit of us, may occasion, peradventure, some strong opinion of another kind; but impression of love and true respect, nothing can give but this. Greatness of place and authority may make us feared, depth of learning admired, abundance of wealth may make men outwardly obsequious unto us; but that which makes one man a god unto another, that which doth tie the souls of men unto us, that which, like the eye of the Bride in the book of Canticles, ravishes the heart of him that looks upon it, is goodness. Without this, mankind were but (as one speaks) 'stones heaped together without mortar, or pieces of boards without any cement to combine and tie them together.' For this it hath singular in it, above all other properties of which our nature is capable, that it is the most available to human society, incorporating, and, as it were, kneading us together by softness of disposition, by being compassionate, by gladly communicating to the necessity of others, by transfusing ourselves into others, and receiving from others into ourselves. All other qualities, how excellent soever they are, seem to be somewhat of a melancholic and solitary disposition: they shine then brightest, when they are in some one alone, or attained unto by a few; once make them common, and they lose their lustre. But goodness is more sociable; and rejoiceth in equalling others unto itself; and loses its nature when it ceases to be communicable."

I wish you all God-speed.



## II.—NOTES OF CASES TREATED IN WARD XIX. OF THE ROYAL INFIRMARY.

Reported by SKENE KEITH, M.B., C.M., Surgeon for Out-patients to the Samaritan Free Hospital, London, and Surgeon to Vincent Square Hospital for the Diseases of Women, Westminster.

THE first winter session was nearly half over ere the two small rooms set apart in the New Infirmary for the surgical treatment of ovarian diseases were ready for the reception of patients. Allowing for the intervals when the rooms were closed during the autumn recess, the time embraced in this report is three years, bringing the results down to the end of May of this year.

As to the wards themselves, they are fairly well adapted to their purpose. Each contains two beds; but it was found more convenient to put three beds into one of them, and retain the other for the patient who was the subject of operation for the time being. They are well ventilated, are never too hot in summer, and in winter they can be kept comfortably warm with a single fire, though on some days last winter the temperature was rather low. They are situated in the main building, and open directly off the main corridor. The nurses' room is, unfortunately, on the other side of this corridor, so that every time one enters the room there is a risk of the patient being disturbed in the first days after an operation. There is little quiet, as a rule—indeed I may at once say that the rooms are noisy. Some patients do not mind noise, indeed some prefer to have the door open to hear what is going on; but to others—especially during the weakness of the first few days after an operation—the distress arising from this cause is sometimes great. The number of unnecessary noises that go on in that corridor is remarkable, and one cannot help wondering why it is that the quietest and most perfect part of the whole Infirmary in the floor above should be used as the Lock Hospital. The noise is, however, the only thing than can reasonably be complained of. The patients have every comfort. Anything wanted has only to be asked for, when it is given at once. The nursing has been all that one could desire. Miss Wilson has had charge of all the patients operated on from the beginning.

At first all operations were performed in the large theatre, and the patients suffered in proportion to their feebleness. After being etherized in bed, and the india-rubber sheet adjusted to the abdomen so that merely the line of incision was exposed, the patient was secured to a long narrow board, carefully covered with blankets, with a hot-water bag to the feet, and thus carried downstairs along a very draughty corridor into a room heated at the close of the operation to sometimes upwards of 70° F., and crowded with five or six hundred students, more than half of whom came, probably, from the dissecting-room. The light, though admirable for surface work, was insufficient for securing bleeding points in

the upper part of the abdomen. This was thrown into deep shadow in whatever position the patient was placed; and on account of a cross light, the reflector, which is generally so useful, was of no service. After this had gone on for a time, there came a succession of bad cases in feeble women, requiring long and severe operations. The practice of taking these patients downstairs was discontinued. At the beginning of the next session, at the request of the medical managers, operations in the theatre were resumed, and there were deaths that should not have happened. At that time all operations were performed under the antiseptic spray of carbolic acid. From the constant opening and shutting of doors that went on during the operations, strong currents were made, and it became necessary to bring the spray apparatus so near to the patient that some fatal results were, rightly or wrongly, ascribed to the absorption of a poisonous dose of the carbolic acid. The practice of operating in public was again discontinued, and since then all operations have been done in the patient's own room—the number of visitors being limited by the size of the room. There can be no question that this is an immense advantage to the patients in cases of severe operations, when sometimes the very lifting of them into their beds makes the pulse for a time to disappear from the wrist. A certain number of invitations are issued the evening before, by post-cards, to advanced students who have given in their names, on the understanding that they are not engaged in pathological work nor are attending cases of erysipelas. This arrangement seems to answer in the meantime. No one can have any reasonable cause of complaint, for even in a large medical school the safety of the patient must ever be the first consideration. The complete Listerian system so called has been given up; at least the performing of operations under the carbolic spray has been abandoned as being of doubtful efficacy in preventing septicæmia, and as sometimes being in itself a source of danger in certain long operations and in some conditions of the constitution.

With a single exception—in the case of an emigrant's wife sent from Oregon, for which a special permission of the medical managers was asked, and at once granted—no operations but those of ovariectomy and hysterectomy were performed. Had there been permission to operate on other surgical diseases of women, twenty beds would not have sufficed. These applications have of late become frequent. In addition to ovarian cases which proved to be suitable for operation, there were patients sent with malignant diseases of the abdominal organs, with enlargement of the liver, spleen, cystic tumours of the kidney, etc., with hæmatocele, chronic peritonitis, pelvic abscess, and very many with uterine fibrous tumours. The number of cases with malignant disease of the omentum was remarkable. The most of these were at once sent to their proper place in the hospital; yet in many cases the diagnosis was at first so obscure that some of these were



taken in and kept for a longer or shorter period. Hence the number of admissions in excess of the operations performed.

In all, 191 patients were admitted, and many others were seen as out-patients. Ovariectomy was performed 69 times; partial ovariectomy once, when part of the cyst was removed, and an attempt made to effect a cure by suppuration and drainage; an exploratory incision once, in the case of a patient who had come from Ireland, very anxious to have ovariectomy done, though it was explained to her that it would be better for her to rest satisfied with the relief that tapping had given her from time to time during the last nine years. Hysterectomy, or removal of the uterus, was performed ten times, on account of very large or of bleeding fibroids. In these cases the ovaries were also removed, and these were in every instance enlarged and diseased. The uterus was also twice successfully removed by the vagina—once for epithelial disease, and once in the case of a uterus inverted for many years, with a fibrous tumour embedded in the fundus. The ovaries and tubes were taken away twice. A tubo-interstitial pregnancy at full time was prevented from doing any harm by being removed by abdominal section. A case that is probably unique, of a large liver cyst or dilated gall-bladder, containing 32 pounds of bile, was detached from its extensive connexions, mostly removed, and cured by drainage. One case of suppurating ovarian cyst, admitted in a very bad state, was treated by abdominal incision, and easily cured by drainage. Another case, simulating a suppurating cyst, and sent in as that, was a large abscess connected with the kidney, and which contained a small calculus. It is unnecessary to particularize as operations some cases of pelvic abscesses of large size, cases of dilated Fallopian tubes, etc. No cases of serous cysts of the broad ligament were operated on. These all were treated by tapping, and none of them have returned. Tapping was frequently performed, sometimes for diagnosis, and often to gain time on account of the limited accommodation, for cases had a provoking way of sometimes coming two or three together. No harm ever resulted from tapping, but often great improvement in cases of large tumours, allowing some patients to get into a better state for operation; and others, who dreaded the radical cure, were glad to put off the evil day for a time, and were tapped with much relief. In the case of the interstitial pregnancy and in the case of large bile cyst, a correct diagnosis was not made out beforehand. Every other case of operation was carefully and correctly diagnosed.

In the accompanying table are given details of all the operations of ovariectomy and hysterectomy, in all 79: 69 cases of ovariectomy, and 10 cases of hysterectomy. The weights of these tumours are given, also the number ofappings, the duration of the operation, and the amount of adhesions. Without these, statistics of results are of little value. It will be observed that during the first year many



| No. | DATE.                  | RESULT.    |
|-----|------------------------|------------|
| 1   | January 1880 . . . . . | Recovered. |
| 2   | January . . . . .      | Recovered. |
| 3   | February . . . . .     | Recovered. |
| 4   | March . . . . .        | Recovered. |
| 5   | March . . . . .        | Recovered. |
| 6   | March . . . . .        | Recovered. |
| 7   | March . . . . .        | Recovered. |
| 8   | March . . . . .        | Recovered. |
| 9   | March . . . . .        | Recovered. |
| 10  | April . . . . .        | Recovered. |
| 11  | April . . . . .        | Recovered. |
| 12  | April . . . . .        | Died.      |
| 13  | May . . . . .          | Recovered. |
| 14  | May . . . . .          | Recovered. |
| 15  | June . . . . .         | Recovered. |
| 16  | July . . . . .         | Recovered. |
| 17  | August . . . . .       | Recovered. |
| 18  | October . . . . .      | Recovered. |
| 19  | October . . . . .      | Died.      |
| 20  | November . . . . .     | Died.      |
| 21  | December . . . . .     | Recovered. |
| 22  | March 1881 . . . . .   | Recovered. |
| 23  | April . . . . .        | Recovered. |
| 24  | April . . . . .        | Recovered. |
| 25  | April . . . . .        | Recovered. |
| 26  | April . . . . .        | Recovered. |
| 27  | April . . . . .        | Recovered. |
| 28  | May . . . . .          | Recovered. |
| 29  | May . . . . .          | Recovered. |
| 30  | June . . . . .         | Recovered. |
| 31  | June . . . . .         | Recovered. |
| 32  | July . . . . .         | Recovered. |



of the tumours were large. The most of these were rejected cases from elsewhere.

Of the 69 ovarian cases, 15, or 21·73 per cent., were free from adhesions, while 54, or 78 per cent., were more or less firmly attached. 31 of the cases, or nearly one-half (44·92 per cent.), had been tapped from one to nine times before operation. This is a large proportion nowadays, and gives a better idea than anything else of the nature of the cases dealt with. Both ovaries were removed nine times, or 13 per cent. In all the cases of hysterectomy the ovaries were taken away.

The time occupied by the operation varied from seventeen minutes to two hours and a quarter. The time taken up by the application of the cautery in dividing the pedicle varied from about five to eight minutes. The cautery was used 55 times. Ligatures were used only when the pedicle was very thin, or in those cases where the tumours had to be enucleated from one or both broad ligaments. The extra-peritoneal method was used in nine out of the ten cases of hysterectomy. The convalescence was much slower in these patients.

Of the whole number of 191 cases admitted, 9 died. One who was sent by mistake to the ward a few weeks ago was suffering from contraction of the mitral orifice and pregnancy. She was in a dying state when admitted, and lived only thirty hours. A case of ovarian tumour arrived in a state of collapse, and died in a few days, no operation having been possible. She was tapped almost immediately before going to the train, to facilitate a long railway journey. The case of Battey's operation died of septic peritonitis: the operation was performed under the carbolic spray. The case of partial operation, also done under spray, died a fortnight afterwards of acute bronchitis, during the very severe weather of the winter before last.

In one of the other five fatal cases the uterus was removed along with two large ovarian tumours, which were so matted together with the uterus that they could not be separated from it. This operation was performed under a 10 per cent. spray of boro-glyceride. She died of acute septicæmia. She had been tapped nine times, and had been strongly urged not to run the risks of operation.

Of the four fatal ordinary ovarian cases, case 12 died of rapid septicæmia. Drainage might probably have saved her. Cases 19 and 20 were supposed to have suffered from the excessive absorption of carbolic acid during the operation. In one the cause of death was acute nephritis; in the other no cause of death could be found. These three cases were operated on under a 2½ per cent. carbolic spray, with every possible care. In the other, case 41, the cause of death was obscure,—a feeble woman came out of a severe operation with a pulse at 170, and it never fell. This is the only death of all those operated on without the carbolic spray.

The cases of hysterectomy were operations of the most severe



kind. The tumours varied from 5 lbs. to 42 lbs., the average weight being over 20 lbs. They all recovered, and are remarkable as being perhaps the only cases of fibrous tumour of the uterus that ever left the Royal Infirmary perfectly cured, and probably the only ones from any general hospital in this country.

The difference in the mortality of cases operated on under the so-called pure Listerism and without it in these 79 cases is given in the following table. To these, to make the comparison exact, are added other three cases of abdominal section—namely, two cases of removal of the ovaries and tubes, and the case of interstitial pregnancy,—in all, 82 operations.

*Carbolic Acid Spray Cases.*

|                                      | Cured. | Died. | Total. |
|--------------------------------------|--------|-------|--------|
| Ovariectomy, . . . . .               | 18     | 3     | 21     |
| Hysterectomy for fibroids, . . . . . | 2      | 0     | 2      |
| Batley's operation, . . . . .        | 0      | 1     | 1      |

24 cases, with 4 deaths (16·66 per cent.) 24

*Boro-glyceride Spray Cases.*

|   | Cured. | Died. |
|---|--------|-------|
| Double ovariectomy with hysterectomy, . . . . . | 0      | 1     |
| Hysterectomy for fibroid, . . . . .             | 1      | 0     |

2 cases, with 1 death.

*No Spray.*

|   | Cured. | Died. | Total. |
|---|--------|-------|--------|
| Ovariectomy, . . . . .                    | 46     | 1     | 47     |
| Hysterectomy for fibroids, . . . . .      | 7      | 0     | 7      |
| Batley for fibroid, . . . . .             | 1      | 0     | 1      |
| Case of interstitial pregnancy, . . . . . | 1      | 0     | 1      |

56 cases, with 1 death (1·78 per cent.) 56

The length of the convalescence depended on the amount of strength the patient had at the time of operation. Cases of simple non-adherent tumours got well easily. In those who had been often tapped, return of strength was slow. Those cases sent from Edinburgh or the neighbourhood were seen early, and were generally simple cases; while those who came long distances were seldom sent till the patient could work on no longer, and many of these arrived in a very exhausted condition. The number of patients who have come from Orkney and Shetland is remarkable; and there are at present in the same room three young women from the north, who have amongst them only a single uterus and no ovaries.

It is impossible in a report such as this to give a detailed account of every case. I shall only go very briefly into a few of those that present some point of interest.

(To be continued.)

## III.—ON EXTIRPATION OF THE LARYNX.

Lecture in the Policlinica of the School of Medicine of Seville. By Professor RAMON DE LA SOTA Y LASTRA, M.D., A.M., Ph.D. Translated by JOHN BOYD, M.D., Slamannan.

GENTLEMEN,—You will, no doubt, perfectly remember the old man who, not many days ago, came to this policlinica from Fuenté de Cantos, seeking relief from a malady in his throat. He was a field-labourer, about 55, although more like 75, of indefinable temperament, languid in expression, his withered countenance stamped with a mournfulness that excited compassion; the skin dry and discoloured, and his emaciated body bent more by the ravages of disease than the burden of years. His respiration was loud and difficult, with voice feeble and hoarse. Hardly intelligible, he told us that about a year previously he had begun to cough and to feel uneasy in the throat, which symptoms augmenting daily, accompanied by copious expectoration, difficulty in phonation and respiration, especially during sleep, from which he awoke many nights with a feeling of suffocation; with incapacity to swallow solid food, while fluids were ingested with effort and uneasiness, frequently going the wrong way, producing choking, and being expelled by mouth and nostrils between severe fits of coughing. Sleeplessness and defective alimentation had placed him in the gloomy condition in which we found him. Twelve months previously his health was good, and though never fat, he was well nourished, and had sufficient strength to undergo the rude labours of the field. The physician he had consulted prescribed gargles, balsamic and anodyne potions, and irritating ointments on the anterior part of the neck.

If the external aspect of the patient had not demonstrated it to us on first sight, this statement would have led us to consider that we had to deal with a very serious laryngeal malady. From the prolonged examination we made, the following was ascertained:—Temperature normal, pulse soft, compressible, small, regular, not too rapid; integrity of the digestive organs, as also of the circulation and nervous system; the lungs quite healthy; the lymphatics unaltered, as the most minute examination did not disclose the slightest tumefaction of a single ganglion in the submaxillary region, the lateral cervical, nor anywhere else. The buccal and pharyngeal mucous membrane presented its normal character; and in the tongue no papillary enlargement was perceptible. By exterior palpation it was perceived that the larynx was unusually large; the external angle formed by the junction of the two thyroid lamina was rounded, giving to this cartilage the aspect of the shell of a crustacean; pressure on these produced a very painful sensation. The laryngoscope presented the base of the tongue tumefied, obscurely red in colour, the glotto-epiglottic fossa almost obliterated, the epiglottis thickened and deformed, the circumfer-

ential margin rounded, unequal, and ulcerated. On its posterior aspect a sessile tumour was visible, ovoid vertically, which involved the left ary-epiglottic fold, and descended into the ventricular fillet of the same side, in the posterior plane of which there was a large eminence that obstructed the glottis, and was seen to move with inspiration and expiration. This tumour was lobulated, granular, with crateriform ulcers in its central portion; from it evidently originated those lancinating pains of which the patient complained. The right laryngeal mucous surface was swollen and violet coloured, the vocal cords invisible. The index finger, when introduced into the throat and touched the epiglottic tumour, discovered the cartilaginous hardness of the neoplasm, very different from that of the base of the tongue, exacerbating the pain, and producing a slight effusion of blood. The frequent, broken cough displaced large muco-purulent sputa.

The sufferer could tell us nothing as to the maladies of his parents or relatives, and on repeated inquiries assured us that he had always enjoyed good health—had had neither syphilis, eruptions, or any preceding throat affection, although he had occasionally exceeded in *aguardiente*, and had been constantly exposed to heat and cold, wind and rain. His wife and children were healthy.

I gave him a mixture of bromide of potass, and told him to come next to my consulting room. When we had finished the examination at the policlinica, you asked me, "What are you going to do with this old man? Let him return to Fuenté de Cantos—that will save us much annoyance." I assure you, gentlemen, that if this was not a case for extirpation of the larynx, there never was one in which that operation was indicated. I recognise its gravity, know what those will say who have taken the trouble to read even one of the 42 now published, and what I will have to endure—if God wills that the patient should recover. I do not ignore the work before me for five or six months; but this poor old man from Estremadura, asking my assistance, and from no selfish motive, shall I send him away without doing all for him that conscience demands? To-morrow, my friends, the Drs Romero, Rosa, Salado, and Diez, will see him, and if these, as anatomists and operative surgeons, conclude that the larynx should be extirpated, and if the patient, with full knowledge of the undertaking, should submit himself to operation, we will quickly perform it. . . .

Gentlemen, you were present at the detailed examination of the case, and the prolonged consultation at which all agreed that the operation was to be performed as speedily as possible, if we wanted to save the life of the sufferer. You will remember that my opinion in no way influenced that of my colleagues, as I was last to give it, and even if I had divulged it first of all, it would not have mattered, as under a scientific point of view I was the least authorized.



The unfortunate patient, alarmed at the peril of the operation, resolved to return to his village, and die in the bosom of his family. We did not altogether regret his resolution, but as some of those who had observed the case held the opinion that extirpation of the larynx never should be executed, it seems proper to me to discuss and try to settle the following questions:—1. Is the extirpation of this organ an admissible operation? 2. If so, is it admitted? 3. If received, what are its indications and contra-indications? 4. In the case which gave occasion to this conference, what would have been our plan of operation?

By inadmissible operation, gentlemen, I understand that which directly produces death by abolishing a function vitally indispensable. This is not the case in extirpation of the larynx. True it is that this organ contributes to the realization of two primarily vital functions, respiration and deglutition, and one that I may venture to term almost vital—phonation. The first can be suspended only a few moments, the second for some hours, the third for a long time if the grief of the individual at not being able to communicate his thoughts is not to imperil his existence. But respiration is perfectly effected by means of a tube inserted into the trachea for many years. You may see daily the girl coming with lupus in the throat, on whom we performed tracheotomy fourteen months ago. Many practitioners and students saw the boy who carried his canula with him during three years, from the papilloma which filled his larynx reproducing itself almost as quickly as extracted, and notwithstanding repeated cauterization of its site. So far, then, respiration can be well carried on without a larynx, care being only required that in cold weather the temperature of the air should be modified by passing through a damp cloth placed before the external orifice of the cannula, to avoid mischief to the respiratory organs.

Deglutition is effected by means of the œsophageal sound until the parts are restored so that they may let the aliments slip past without inconvenience. This mode of nutrition is sufficiently efficacious, not only on the subjects of operation, who require a light diet, but also on the insane, who refuse to eat. After some time has elapsed the natural swallowing is effected with as much ease as if the larynx existed, only it is necessary to shut the superior aperture of the cannula to prevent food passing into the trachea and bronchia. All of us who were present at the Congress International de Laryngologia, held at Milan in 1880, will remember we saw the young woman eating and drinking without the slightest trouble, from whom Dr Caselli had extirpated the larynx a year before. Not only may respiration and deglutition be perfectly well effected after removal of the larynx, but vocalization also may remain intact. The larynx is not, as vulgarly supposed, the organ of the voice, still less that of speech; in it the vibration of the expelled current of air is merely performed, although this vibration

is essential to the production of sound. Based on this knowledge art comes to the aid of nature, and the apparatus of Gussenbauer, the artificial larynx of Bruns, the tube of Caselli, and the simple fenestrated cannula of Novaro, causing the air expelled from the lungs to vibrate, have enabled the operated to speak intelligibly, although the *timbre* of their voice was far from natural. If none of the functions to which the larynx contributes are abolished by absence of this organ, death could not be produced by the operation we are now discussing. Statistics confirm this position. In 29 cases of laryngeal extirpation, the histories of which I have read, death occurred 9 times from return of the malady which called forth the operation, 5 from pneumonia, 2 from collapse, 2 from marasmus, and 1 from pulmonary and tracheal phthisis, 1 from passing a bougie into the mediastinum, and 1 from suffocation. You perceive that not once has the operation *per se* caused death, and this supervened in many cases in six, seven, and nine months—the most rapid was two days. We must now add to the plea in favour of the admissibility of the extirpation of the larynx among the classed operations the following cases of at least temporary cure:—

One of sarcoma, in which Bottini performed total extirpation, and who at the end of three and a half years was healthy, filling the office of letter-carrier between Mazzini and Trabaro.

One of carcinoma, operated on by Wegner, with no relapse at the end of seven months.

One of sarcoma, from whom Lange ablated the hyoid, the anterior part of the œsophagus, and all the larynx except the inferior portion of the cricoid, who at the end of five months enjoyed perfect health.

One of lympho-granuloma, which obliged Caselli to extirpate the larynx, the pharynx, the base of the tongue, the soft palate, and the amygdaloids, the patient, when presented a year afterwards at the Laryngological Congress at Milan, was a stout, healthy young woman.

Two of epithelioma, operated on by Thiersch, in whom, at the end of thirteen and twenty-one months, there was no relapse.

One of carcinoma, wherein Novaro had to remove all the larynx and part of the trachea, who was healthy and at work four and a half months after the operation.

I do not know, gentlemen, but these data may appear not very encouraging for justifying the surgical proceeding we are now considering; but, to form an accurate decision, it is necessary to bear in mind that almost all these were cases of infective maladies, in which relapse is the general rule and definitive cure the exception; and that these operations were performed when life was so seriously compromised that its duration could not last many days. A ruined organization, continual suffering, and death certain and early—these were the motives that obliged the surgeons to have recourse to the



bistoury: under circumstances thus fatal, a single successful termination is enough to justify an operation. That of ablation of the larynx is therefore scientifically admissible.

Since performed for the first time in 1866 by Patrick Heron Watson in Edinburgh, the most celebrated surgeons—German, Italian, English, Spanish, and American—ventured to follow his example. The French, however, repelled it; and such notable specialists as Krishaber in Paris, and Simon in London, evinced repugnance to it. But Drs Foulis of Glasgow and Philipp Scheck of Munich advocated it so completely in the International Medical Congress of London, that it was there recognised as a classical operation; and since then I am not aware that any eminent surgeon or renowned specialist has dared to oppose it. This general silence declares it an admitted operation.

Nevertheless, the procedure in question, although accepted and acceptable, is not one of small importance, of easy execution, or free from consecutive dangers. On the contrary, the organ removed is one of the noblest, situated in a region constantly moving, and in which the work must be done with the utmost precision and delicacy—inasmuch as the deviation of the bistoury to the extent of some millimetres from the right line might cause formidable accidents to supervene, compromising the life of the patient and the reputation of the surgeon. The subsequent treatment is slowly carried out, and is not completed without the patient undergoing considerable dangers. From these reasons the operation should never be undertaken unless under the pressure of the most imperative necessity, and after having duly considered the indications and contra-indications. We shall proceed to the study of these with the deliberation required.

When Czerny made his first experiments on dogs, and when Billoth performed his first extirpation of the human larynx in 1873, although Watson had performed it in Edinburgh in 1866, it was unknown in the medical world till Foulis quoted it at the Congress in conceding him the priority. Then it was that many practitioners, excited by the result at the moment, believed that in all incurable maladies of the larynx, as well in the malignant as in the benign tumours, in the cicatricial contractions and syphilitic stenosis, as in those resulting from typhoid perichondritis, they had only to extract the affected organ, and the patient was relieved of his malady, and in most cases also freed from disagreeable consequences. But subsequent experience has come to greatly calm down the previous enthusiasm, although, in my opinion, this is still overweening, as proved by the conclusions of the treatises presented by Foulis and Scheck to the Congress referred to.

Those of Foulis are as follows:—

1st. The total extirpation of the larynx is preferable to the partial removal.



2nd. It is indicated in cases of malignant tumours—(a.) As soon as an exact diagnosis is made. (b.) When the lateral cervical glands are affected, they might present an important obstacle to the operation. (c.) No operation should be attempted on patients above 70 years.

3rd. The larynx might be removed when greatly tumefied and ulcerated, even where no malignant affection exists.

Those of Scheck are thus stated :—

1. The extirpation in totality is indicated—(a.) Always where the greater part or more than the half of the larynx is invaded by a malignant neoplasm, not extending to the immediate parts. (b.) In those cases of dysphagia due to a very marked hypertrophy of the cricoid or arytenoid cartilages, or of its mucous investment, in which alimentation by means of the stomach-tube is impossible, and nourishment per rectum insufficient.

It is contra-indicated—(a.) In all cases of benign neoplasms and of multiple papillomas, even though impossible of removal, and incessantly they relapse. (b.) In cases of perichondritis and of necrosis of the cartilages. (c.) In the cases of malignant neoplasms which have infected the tissues in the vicinity of distant organs, or which co-exist with other serious maladies, even though non-malignant.

2. Partial extirpation is indicated—(a.) In tubular laryngeal stenosis distinct and obstinate, and in any other form of stenosis in which the vocal apparatus has suffered destruction so extensive as to render intonation impossible without an artificial larynx. (b.) In all cases of benign neoplasm of the larynx in which thyrotomy is required, but cannot be performed from danger of fracturing the ossified cartilages. (c.) In the cases of malignant neoplasms limited to a single cartilage, or larger, but not implicating more than the half of the larynx.

Contra-indicated—(a.) In simple laryngeal stenosis susceptible of dilatation, and especially in cases of membranous adhesions between portions of the larynx. (b.) In cases of papilloma, even though relapse occurs repeatedly. (c.) In cases of malignant neoplasms which, though unilateral, have infected organs immediate or distant.

While duly respecting the opinions of professors of such eminence, I must say that, after having maturely considered them, I cannot accept them absolutely, nor present them as rules of action. I admit that the malignant neoplasms call for operation, and the sooner the operation is performed the greater the chance of definitive recovery. But we must take into account the favourable condition in which the individual is generally found at the earliest appearance of the lesion. To submit a person full of life and strength to an operation most serious from its frequent accidents, when, perhaps, by omitting its performance, more time would elapse without endangering his

existence more than would result from delaying it till its reappearance after operation, appears to me a bold and hazardous measure, which I cannot dare to recommend, because I could not dare to carry it out. The unfortunate lamplighter who attends assiduously at the polyclinica, in whose larynx we have seen the neoplasm gradually appearing, presenting the clinical characters of epithelioma, and till now we have never once thought of performing the operation in question. What would induce us to do so at present to this strong, hearty man, who realizes perfectly his domestic and social life, with no other complaints than the alteration of his voice, a constant pungency, and occasional passing pains? Perhaps the day will come when, without notifiable deterioration of his general health, the cervical glands will become infected, rendering it impossible to operate on him, as happened to us a year ago with the esparto-worker. Nevertheless, I agree perfectly with Foulis and Scheck in regarding this propagation of the malady as a formal contra-indication of the surgical action. Yet the espartero, with his swollen, hard, and painful glands, preserves his flesh and strength, breathes, swallows, and speaks well, is fit for work, and retains so much energy as might be envied by persons reputed healthy. I do not repent the not having undertaken the extirpation of his larynx, notwithstanding the extensive carcinoma which covers the posterior aspect of his epiglottis and both ventricular fossæ; his sufferings have been quite endurable, and no one can foretell how long he may remain in a relatively satisfactory condition.

It is not sufficient, as Foulis remarks, that the larynx should be much tumefied and ulcerated to render it imperative to perform its extirpation, as these phenomena are frequently observed in many larynges of the tuberculous, the syphilitic, the leprous, and those affected with lupus, etc. In the excision of this organ in such cases, we would only accelerate the fatal doom of the individual. Still less does it seem to me to be permissible to perform the operation totally or partially on account of obstinate intractable tubular laryngeal stenosis, nor any other variety of stenosis, even though the vocal apparatus has suffered a lesion destructive of phonation, as Scheck avers. Life can be sustained without speech, and asphyxia can be obviated by tracheotomy.

With Fauvel and Burow, I consider that, in the benign neoplasms of the larynx, thyrotomy is never indicated, since, with patience on the part of the surgeon and patient—performing tracheotomy when this becomes necessary—we may obtain, *per vias naturales*, what in many cases we could not by section of cartilage; hence, in thus far I do not agree with the second indication laid down by Scheck for the partial removal of the larynx.

I do not find any other indication for the operation in question beyond the *progressive and persistent difficulty of respiration and deglutition*, which alone is sufficient to speedily destroy the most



robust constitution, and bring the subject, by the most dreadful sufferings, through all the grades of marasmus to an appalling death.

I regard it as contra-indicated—1. When the malady could be overcome by other means. 2. When a general morbid condition is detected in other organs. 3. When complicated with other serious diseases, general or local. 4. When the organization is exhausted by age, by misery, by the ravages of the same malady, or by anterior suffering.

You will now understand why I tell you that if the old Extremefio was not a case for extirpation of the larynx, no other could be found.

The tumour, which was an epithelioma, impeded respiration and deglutition to such an extent as to render moments of asphyxia imminent, and preventing him from swallowing anything but liquor. The sanious and foetid ichor that proceeded from the ulcers mixed with the air in its course to the lungs and the food to the stomach, thus poisoning the whole system. There was no cervical glandular congestion nor signs of disease in any other organ. It is true the individual was emaciated, and appeared older than his true age, but it was not a broken-down organization, as was shown by the long journey he had made.

Some may think that the contra-indication in this case was the malady itself, cancer being usually recurrent, as proved by the statistics quoted. I do not gainsay the probable reproduction of the disease; but does cancer when operated for in other parts of the body give better results? According to Bruns, he has practised thyrotomy nineteen times for malignant laryngeal neoplasms, and in all but one, before a year was over, the disease reappeared. A year and a half ago I excised the right half of the tongue on a female of 72 to relieve her of an epithelioma, which prevented her from eating, and caused her lamentable suffering. In eight months the left sub-maxillary gland became affected, and at the year's end she ceased coming, I suppose from her disease. Yet, I still believe we did well in operating on her, as in the months which intervened before the return of the neoplasm the poor body was free from distress. We do not seek in laryngeal cancer what we do not exact in that of the tongue, nor the mamma, nor in the lips.

Should it be objected that the operation for removal of the larynx is much more arduous than that required in all these other maladies, I will intimate that on this account I do not give in to the proposal of Foulis to operate wherein the diagnosis of cancer is exact; but wherein I recommend it is when the days of the individual are so numbered that the final account could not long be delayed. Thus, in the unhappy event of the patient succumbing even on the day of the operation by whatever accident, if you have performed under the circumstances I have referred to, you have no cause for self-accusation of having hastened his death.



Before concluding, I shall briefly discuss the method of operating I proposed to follow if the old man had submitted to it, since neither in the works of operative medicine nor in those of laryngology will you find it described minutely. I have frequently practised it on the cadaver, and find that the best way of effecting it is the following:—Ten or twelve days previous to the extirpation, tracheotomy ought to be performed in order to secure due respiration during the operation—to be able to maintain the anæsthesia of the patient, and also that, fixing the trachea to the tissues covering it, it may not sink below the fork of the sternum when separating it from the larynx. The patient being placed in the dorsal decubitus on the operating-table after chloroform is administered, the head is made to hang down, in order that the fluids may run out of the wound and not escape into the bronchia. The head being held fixed by an assistant, an incision is made from a centimetre above the hyoid bone down to the superior angle of the tracheotomic wound, and carried down till it reaches the thyro-hyoid membrane and the thyroid cartilage. If the arteria laryngea media should bleed, torsion will avail to arrest the hæmorrhage. With the thermo-cautery of Poquelin the thyroid gland is to be cut by its isthmus, its adhesions to the trachea and the larynx being carefully separated. The thyroideum externus and thyro-hyoid muscles are to be removed with the handle of the scalpel, their insertions in the thyroid are to be cut, as also those of the constrictor-inferior of the larynx, in which manipulation the edge of the instrument should always be made to go gliding over the scutiform cartilage.

The larynx being dissected from the superjacent and side tissues, the trachea is now to be cut transversely between the first ring and the inferior border of the cricoid, and a covering of cotton salicified is to be placed over the tracheal aperture, separating the larynx from the pharynx as far as possible by evulsion, cutting the fibres of the constrictor not previously touched, and removing the mucous membrane to the level of the arytenoid cartilages. The larynx being now hooked by its superior-anterior angle, and the hook confided to an assistant, the thyro-hyoid median ligament is divided by a sharp-pointed straight bistoury, immediately below the hyoid bone, the left index finger being previously introduced into the mouth to ascertain the course of the knife. This fixed at the point of transfixion, it is changed for a round-ended bistoury, and, directed by the finger, the instrument is directed right and left by the whole internal surface of the hyoid, cutting the hyo- and glosso-epiglottic ligaments, the thyro-hyoid membrane, and the superior thyroid arteries, which require ligatures. Catching these between the thumb and index finger, the lateral thyro-hyoid ligaments are divided by curved scissors on the plane, and the larynx with the epiglottis is removed.

The wound being washed with a tepid 4 per cent. boracic acid

lotion, an œsophageal sound is next introduced into the stomach, the superior extremity of it projecting from the wound; this is now covered with salicylized cotton, after withdrawing that covering the trachea. On the anterior part of the neck is placed the protecting cloth and gauze of Lister. Every two or three hours the cotton is to be renewed, to avert the decomposition of the liquids oozing from the wound, which have acted in some cases most unfavourably on those operated on.

I shall say nothing about the patient's regimen, the time at which the œsophageal sound should be passed by the mouth, nor give any abstract of alimentation, nor as to how the subsequent treatment is to be conducted, as all this varies in each particular case, and our treatment must be adapted to the circumstances. It is enough to state that in most cases the patients have to traverse periods of great danger, and have only escaped by the assiduous and enlightened care lavished on them by the operating surgeons, who had to exhaust all the resources of science and invention more in the subsequent management than in the act of operation.

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#### IV.—SURGICAL EXPERIENCES IN THE ZULU AND TRANSVAAL WARS, 1879 AND 1881.

By D. BLAIR BROWN, F.R.C.S. Edin., Army Medical Department.

*(Continued from page 151.)*

CASE IV.—Private J. S., of the 58th Regiment, was hit, at the Majuba Hill, in the left ankle. The bullet entered two inches above the outer ankle anteriorly, and made its exit at the inner edge of the tendo Achilles, near the inner malleolus. With the exception of some gritty bony material coming away in the discharges for a few days, there was no other evidence of injury, and the wound healed up rapidly without leaving any impairment of movement of the joint behind.

CASE V.—Captain L., of the 58th Regiment. This officer was hit twice,—the only case of the kind which occurred at Ulundi,—in the arm, and in the ankle. He wore a pair of leather gaiters over his boots. On taking these off, the internal malleolus of the left ankle was found swollen and exceedingly tender. A very small opening existed, though none could be found in either boot or gaiter. A probe found a small splinter of the end of the bone broken off and loose. The joint soon got very much swollen, and evidence of suppuration being present, I had to freely incise the tissues, giving freedom to a considerable amount of pus. Poultices were then kept regularly applied. For quite a year afterwards this patient limped when walking, but nothing serious occurred to the joint afterwards, which is now sound and



well. This was a case of the usual gunshot injuries met with in Zululand, round balls fired at long range, with little ammunition to propel them. The gaiter and boot saved the ankle. Had he not been mounted, I should have thought it likely that the injury was inflicted by a spent bullet.

CASE VI.—No. 1393, Private W. W., of the 3rd 60th Regiment, was wounded at the battle of the Ingogo. The bullet entered the left ankle at the outer malleolus posteriorly, apparently traversing the ankle-joint, and making its escape close to the inner malleolus. The whole foot, but especially the joint, was much swollen when on the 18th March I first took charge of him, and he had no power whatever in his toes. The wounds were open and discharging. The foot drooped, and was almost in the same line with the limb. I put it up in a wire splint, supporting the foot and keeping it at its proper angle.

1st April.—Immensely better; swelling going down and the suppuration stopped; wounds nearly healed.

7th April.—Wounds healed. Took the foot out of the wire splint and put it up in dextrin bandages, and allowed him to go out of doors on crutches.

27th April.—Patient to-day was afraid his ankle had become worse, and that it was again suppurating. I therefore removed the dextrin support, and found that such had not occurred. The swelling had all gone down, and there was no tendency to the wounds opening again. This case progressed most satisfactorily, though at first sight it looked very like one that would not get well with such simple treatment.

CASE VII.—No. 2103, Private G. W., of the 3rd 60th Rifles, was hit, at the battle of the Ingogo, in the left ankle. My *confrère*, Surgeon L. B. Ward, asked my opinion about the case, which was under his care, and we made out the following:—The bullet had entered one inch below the left internal malleolus, and made its exit a little below the external one. The tarsal bones were rattling about like a bag of marbles. On probing it was found that the tarsal bones as well as the joint were destitute of cartilaginous covering, and the suppuration and swelling, as well as pain, were excessive. Amputation at the ankle was performed by Mr Ward, I acting as assistant. The rules and incisions taught by Mr Syme were faithfully adhered to, and the stump dressed with oil-silk, tenax, etc., as recommended. The operation was done on the 14th April. The stump had healed, and the patient was out of doors enjoying the cool fresh air, sitting in a chair, on the 3rd of May. An excellent stump resulted.

Of injuries to the foot the following may serve as illustrations:—

CASE VIII.—No. 999, Private R. M., of the 94th Regiment, was wounded at the engagement of Ulundi, while in the middle of the



square. The bullet passed through the toe of his boot, entering the inner side of the matrix of the nail of the large toe of left foot, passing along its side into the sole of the foot, tearing up the tissues of the arch of the foot, and forming a wide, gaping wound, and lodging in the inner side of the os calcis without fracturing it. From this bone, after using considerable force with the lever, I extracted it, and the case did exceedingly well. This case presents several points of interest,—the small entrance wound, the absence of any open track as far as the commencement of the plantar arch, and the presence from that locality, along the whole curve, of a wide, gaping furrow, and the lodgement of the bullet in the os calcis. The bullet, a well-preserved Enfield rifle one, must have passed into the toe in its normal axis of flight, and, when it lost part of its momentum, must have somewhat changed it in passing along the plantar arch, and then lodged. Such injuries to the os calcis, unless freely drained from the commencement, really are more serious than one would at first believe. Bones of this nature readily take on internal carious action, and what was quite local becomes much extended and more severe. This case, for example, did well; the next one did not.

CASE IX.—Private T. T., of the 58th Regiment, was hit, on the Majuba Hill, in two places, the abdomen, as already recorded, and foot. The former was a penetrating wound, and was followed, after healing, by partial paralysis of the limb. The patient stated that when in the act of running he was hit in the heel, the bullet passing from the outer to the inner side of the os calcis, near the insertion of the tendo Achilles. On probing, a large number of sequestra were found. The wounds were discharging very foul pus, and the patient was suffering from hectic and great nervous excitability, being quite maniacal when his wound was being examined.

16th April.—Under chloroform I removed numerous loose lying pieces of bone. I, however, found, after doing this, that the whole of the surrounding tissues were soft and carious. I therefore determined to remove whatever there was necessity for, and gouged for over fifteen minutes, and was unable to come on healthy bony tissues. Finding this, I made an incision from the tendo Achilles down the centre of the heel to the end of the os calcis, and excised the bone. A great deal of venous oozing succeeded. Case went on favourably.

19th April.—The temperature rose alarmingly to-day to 104° F. The foot became red and swollen, and a very abundant and purulent discharge came away from the wound. Charcoal poultices freely applied.

20th April.—Symptoms of blood-poisoning developed, and continued for several days to increase.

2nd May.—The above not diminishing, and the wound being very purulent, amputation of the leg at the lower third was resorted to.

The stump was dressed in the manner recommended. The articulations of the astragalus and cuboid bones were far advanced in caries, and the ankle-joint itself was a huge collection of pus.

*5th May.*—Very little discharge; flaps healing, and patient very much more cheerful.

*7th May.*—A restless night. Had a severe rigor, followed by profuse perspiration. A large bed-sore formed over the sacrum.

*10th May.*—The bed-sore sloughed, leaving the sacrum quite bare of its natural coverings. Patient very weak.

*28th May.*—After a prolonged struggle for life, he died from exhaustion. This case was treated in a bell tent.

### GUNSHOT WOUNDS OF THE THIGH.

Except penetrations of the body cavities, by far the most serious injuries the field surgeon is called upon to treat are those of the thigh in which there is shattering of the femur. Surgeons have formed various opinions as to the proper method of treatment to adopt in such cases. In wars in civilized countries, where there are towns near most battlefields, and good roads along which to convey such serious cases, they have a much better chance of being soon placed in a position where rest is possible, and are therefore more likely to recover. In South African warfare how different is the case! As in gunshot injuries elsewhere, where the bullet passes through the muscular portion only of the thigh, the wound heals very rapidly.

CASE I.—No. 295, Private R. C., of the 94th Regiment, was in the square at Ulundi, and hit in the right thigh. The bullet entered at the apex of Scarpa's triangle, just avoiding the femoral artery, and, taking a course round the bone, came out on the other side exactly opposite. The wound, after sloughing, healed very soon, without any constitutional or other complications.

CASE II.—No. 1876, Private J. G., of the 58th Regiment, was in the square at Ulundi. Firing had just ceased, and he was turning round on the ground, he having lain down, when he accidentally came into contact with a comrade's rifle, which was loaded and lying close to him. It went off, the bullet entering the right thigh posteriorly about its middle, in the central line, and made its exit two inches above the outer side of the patella. Wound of entrance was small and clean, that of exit triangular and large, more than an inch long. A long, very painful sinus, followed by suppuration, was present. This after a time got well.

With regard to cases of fracture of the femur in gunshot injuries, I shall detail three cases illustrative of the effects of the modern rifle and conoidal bullet. In one case I attended immediately after he fell, during the thick of the battle; in the second the patient was removed to a camp adjacent to the battlefield; and



the third was conveyed ten miles along a bad road by the "bearers" to the hospital.

CASE III.—Lieutenant P., of the 13th Light Infantry, was hit in the engagement at Ulundi, and I saw him almost immediately afterwards. The bullet entered the right thigh about its middle, passing through it in a direct line without injuring vessel or bone, and entered the thigh of the opposite limb about its upper third, causing severe comminution of the femur, and then escaped on the other side. The wound in the right thigh healed, without a drop of pus coming from it, in a few days. The wounds were small, clean, and round, and no difference was perceptible between the entrance and exit. Those in the left thigh were different, the wound of entrance being twice the size of that of the other limb, and that of exit being large, deep, and gaping, and there was considerable hæmorrhage present. I put the limb up in a long splint at the time, and immediately after the battle I wished to remove the limb. This was not agreed to, and I lost sight of him for two days. When seen then his leg was still in the splint I had put on, but the case had become more complicated. A considerable tumour, pulsating strongly, occupied Scarpa's space. Ten days after the injury the wound began to bleed alarmingly and all efforts failed to check it. The limb was then amputated—I assisting—but the patient died upon the table.

The following was the condition of the limb I found on making an examination afterwards. The whole of the femur, except a few inches near the trochanters and condyles, was fractured, and existed only in fragments, large, loose, sharp-edged and pointed pieces. The medullary canal was full of a fungoid mass smelling most foully, and all the fragments of bone were quite destitute of living covering. An inch below where the profunda branch is given off by the femoral the main artery was cut half through, evidently by one of the sharp fragments of the femur, and a long dark clot was hanging from it. The tissues immediately in this vicinity were in a softened condition, the adductors and vastus muscles being pulpified and separated from one another, and the space filled with blood-clot.

CASE IV.—1911, Private S. D., of the 58th Regiment, was wounded when storming the heights of Lang's Neck. When seen by me on the 16th April he was emaciated to the greatest degree, and had severe bed-sores over the trochanters and sacrum. The bullet entered the thigh in front, about its middle, and made its exit through the head—origin—of the gastrocnemius muscle, thus applying to the middle and lower third of the thigh. The leg was not straight and lay out of its normal line. The discharge was very fetid. On probing, loose fragments and bare bone were detected. On movement of the limb some mobility was observed, but as he was so weak very little manipulation





1



3



2

*Plate VI.*



could be practised. He had all the symptoms of hectic, high evening temperature, profuse perspirations, diarrhoea, red tongue, etc. As this man would most certainly die if left alone, and as there was the faintest chance of life if operated on, I determined to do so.

*21st April.*—I removed the limb by means of a long anterior flap, according to the teaching of Spence, in the upper third of the thigh, the wound of entrance of the bullet being in the flap. I have frequently found these can be utilized for putting in drainage-tubes, and thus serve as already made counter-openings.

The femur was found much broken, the upper and lower ends riding over one another for several inches. The slight callus which was being thrown out was not enough to hold the fragments firmly, the blade of a knife easily going between any point of approximation. A large loose sequestrum lay between both ends. The medullary canal was full of fungoid foul material. Periosteum covered the large fragments. A very large abscess existed along the shaft of the bone, up as far as the groin and down to the knee, full of very fetid pus. The knee-joint itself was filled with pulpy material. The muscles of the thigh were pale and waxy in appearance, infiltrated with pus. The leg was œdematous, pitting deeply on pressure. During the operation, before a knife was used, very alarming syncope came on, requiring the immediate withdrawal of the chloroform which was being administered, and artificial respiration being resorted to energetically. It then became a question, as the man was moribund, whether we should operate or not. Slight as the chance of recovery was, however, I gave it the patient.

*22nd April.*—No bleeding, only a little serous discharge on the dressings. Wound of entrance acts as an excellent point of drainage for the stump.

*23rd April.*—Discharge dark and offensive in odour to-day. Flaps fit easily all round. In the evening oppressive breathing and great weakness set in. Vomits his food, and also the stimulants given him.

*24th April.*—Sweats a great deal; oppression of breathing getting worse. Died, conscious to the last.

CASE V.—No. 231, Gunner T. H., of N. 5 battery R.A., was hit at the Ingogo. This man had been a member of the unfortunate column that met with disaster in the Zulu War, and was afterwards a patient of mine at Helpmakaar for enteric fever. The bullet entered his right thigh posteriorly about its middle, taking a direct course through the bone, making its exit anteriorly about the lower part of the upper third of the thigh and hitting the opposite thigh, making a deep flesh wound and escaping. On the 18th March I took charge of this case in the following condition:—His limb was supported in a MacIntyre splint, very great and foul discharge



welling up from the top wound. Pressure over the vastus and rectus muscles caused half a pint of pus to come away. The lower wound was temporarily healed, but was evidently about to break open. The upper fragment of the femur was sticking out very prominently at the middle third of thigh, only the integument covering it. The probe found loose bone and bare shaft. Had a very bad bed-sore over sacrum.

*21st March.*—Got a weight and pulley extension apparatus fitted up in hopes of bringing the fractured ends of the bone together. Amputation was not thought to be the treatment, at least not until conservative surgery had failed. Drainage-tubes were put into the abscess sacs, so that there could be no collection of pus. Removed all loose portions of bone.

*2nd April.*—The pus is now draining off, but the pulley and weight has not made any change in the relationship of the fractured ends of the shaft.

*15th April.*—Under chloroform I made a thorough examination of the case; removed several loose sequestra of bone. The upper fragment of the femur still stuck out anteriorly, while the lower one was drawn up and pressing on to the pelvis. The sharp, bare point of the upper portion of the shaft was removed, as it was causing pain from pressure on the integument. A huge abscess sac existed amongst the muscles at the back of the thigh. A drainage-tube was inserted through a counter-opening made in it. The pulley and weight extension apparatus was again fairly tried. The high position of the injury, and the weakness of the patient, and the chance of the extension succeeding, deterred me from amputation at this time.

*20th April.*—This patient contracted erysipelas, and was placed under the care of another surgeon. After he recovered from that, the same gentleman removed the limb, with a fatal result.

As an instance of what successful results may be obtained by means of the pulley and weight extension apparatus, I shall relate the following case here:—An old man (nearly 60), called M. H., came under my care when doing duty in the Herbert Hospital, Woolwich, on the 13th March 1878. It was at the time when the scare connected with the Russo-Turkish war was in progress, and huge stores, and sheds to contain them, were being taken to and formed in the dockyard at that station. This man, when engaged in building one of those sheds, met with the following accident through the falling of the building. He was the most severely injured of many, most of whom were treated by me. When admitted he was apparently moribund. Face pale, pulse almost imperceptible, most obstinate vomiting, everything swallowed being returned. The right thigh was comminuted, quite in pieces; a simple fracture of the left one existed. The knee of the left leg was greatly swollen and painful. Three ribs on the right side

were fractured, and extensive emphysema of the cellular tissue over this side of chest was found. Altogether a most serious case.

*14th March.*—As he was unable to bear any moving, his limbs were put temporarily in MacIntyre splints. Continues to vomit everything taken. Very feeble.

*15th March.*—A little better; still vomits, however.

*17th March.*—Has not vomited since yesterday. Having iced milk and soda-water only. Had a castor-oil enema with good result.

*19th March.*—Took off the MacIntyre splints, as they were hurting his legs, and rolled pillows simply round them.

*20th March.*—Put up pulley and weight apparatus at foot of bed for both legs. I managed to get both limbs alike in size, and normal in line; great relief followed.

*25th March.*—Tenderness over sacrum; placed on a "fracture bed."

*28th March.*—Bed-sore sloughing. Removed from the "fracture bed" to an ordinary one, which suits much better; air-cushions used to take weight off the bed-sores.

*29th March.*—Raised himself in bed to-day; no pain felt in the ribs, a bandage being still worn around his chest.

*5th April.*—Along with the senior medical officer, I took off all the apparatus to-day. The limbs are nearly the same size, the right one being half an inch less. The bones were decidedly uniting, a good deal of callus being thrown out around the right thigh fractures. No eversion of the feet. Sand-bags are kept along either side of the limbs; no splints. Bed-sores healing rapidly now, black-wash alternating with red-wash being used to them.

*13th April.*—Took sand-bags, etc., from left thigh permanently. Knee still swollen; evaporating lotions used.

*16th April.*—Removed all apparatus to-day. Union seems complete; moved the limbs about freely.

*21st April.*—Sleeps in same manner as other patients now in bed; allowed full liberty. His knee is still a little swollen. Lifts his legs himself readily in bed now.

*2nd May.*—Gets out of bed himself now, and sits on a chair. The legs swell when up. To have friction applied and flannel bandages.

*11th May.*—Walked half way across the ward, aided only with sticks.

*19th May.*—Walks about regularly. From this date he made an uninterrupted recovery, and he left the hospital, walking out, and going over a mile to his home. The limbs were exactly alike in size; the left thigh, when examined, had a slight outward curve, due to use before the callus had quite hardened, a fault on the right side, as I have seen so many cases of useless limbs result

from too long disuse of them after such injuries. With this little exception, the limbs were as shapely as ever they were.

(*To be continued.*)

## DESCRIPTION OF PLATE.

### PLATE VI.

1 and 2 represent anterior and posterior views of the femur of Lieut. P., wounded at Ulundi, in the Zulu War.

3 shows the condition of the humerus found in the case of Private C., 58th Regiment. The projectile had not touched it, but the subsequent inflammatory processes had caused its death.

## V.—CASE OF DIFFICULT LABOUR; METRO-PERITONITIS; CARBOLIC ACID POISONING ON FIFTH DAY; SEVERE GENERAL SEROUS INFLAMMATIONS; DEATH. WITH REPORT TO PROCURATOR-FISCAL.

By A. D. LEITH NAPIER, M.D., Dunbar.

(*Read before the Medico-Chirurgical Society of Edinburgh, 4th April 1883.*)

THE following case presents sufficient features of interest to justify its publication. Cases of carbolic acid poisoning are happily rare in private practice; and, so far as I am aware, few similar have been recorded.

As this case formed the subject of an official inquiry by the procurator-fiscal, I have adhered almost wholly to the report submitted to him.

**NARRATION OF CASE.**—Mrs B., residing at —, two miles west from Dunbar, ætat. 34. *Personal History.*—Good, with exception of considerable œdema pedum during pregnancy. *Obstetrical History.*—Five previous confinements (one of twins), all easy. Delivery on 21st October 1882. Pains short and irregular; rupture of amniotic sac some time before my arrival. Presentation left hand and shoulder, vertex lying to right; chloroform and version; left leg brought down, and afterwards right; operation rather prolonged, owing to absence of waters and uterine contraction. Delivery was completed in thirty minutes or less, the Braxton-Hicks method being observed. The infant, a well-sized female, was still-born, and could not be resuscitated. Placenta expelled very easily.

22nd October.—Complaining of after-pains; some clots passed; bowels acted naturally.

23rd.—Mane—Uterine pain and tenderness; some uterine enlargement; pulse 100; temp. 103°. “R̄ Tinct. aconiti ℥ss. Sig. ℥j. omni min. p. dos iv. deinquē ℥j. omni horâ sumendus.”



Poultice to be applied over hypogastrium. Vesp.—Pulse 108; temp.  $103^{\circ}5$ ; lochia sufficient, not offensive; micturition difficult; injectio morph. acetat. hypoderm.

24th.—Mane—Pulse 100; temp.  $102^{\circ}5$ . Metritic symptoms continued; some peritoneal tenderness; sickness; no lochial flow: “*R*. P. opii et camph. (gr. j. and gr. ij. respectively). Sig., Cap. j. iv. quaque hor.” Also, “*R*. Acid. carbolic. glac. Glycerini āā  $\mathfrak{z}$ j.; aq. dest. ad  $\mathfrak{z}$ vj. Sig.,  $\mathfrak{z}$ ss. ex Oj. aq. pro injectio vaginal.” Turpentine epithem to abdomen. Vesp.—Pulse 110; temp.  $101^{\circ}$ ; headache; less pain over abdomen; no sickness; a slight lochial stain.

25th.—Mane—Pulse 120; temp.  $103^{\circ}7$ ; sweating profusely; no headache or abdominal pain. “*R*. Acid. carbolic.  $\mathfrak{z}$ j.; quiniæ sulphat.  $\mathfrak{z}$ j.; glycerini  $\mathfrak{z}$ j.; acid. sulph. dil.  $\mathfrak{z}$ ij.; aq. ad  $\mathfrak{z}$ xii. Sig.,  $\mathfrak{z}$ ss. secunda quaque horā.” Vaginal injection to be continued, and pills given if required. Micturition sufficient and painless. 4 P.M.—Feeling dull; no headache; uterus still enlarged, but very little pain or tenderness on pressure; pulse 104; temp.  $102^{\circ}$ . 8 P.M.—Temp.  $100^{\circ}7$ ; feeling no pain; is easy.

26th.—By mistake, a large tablespoonful of the undiluted vaginal lotion was given at 7 A.M., and a portion of a spoonful (about a teaspoonful and a half), in water, at 9 A.M. I was not sent for, but on my way to the house met the husband, who had only then discovered the mistake, and was naturally in a state of great agitation. A servant girl, who had given the dose, had been asked by a neighbour, who had come about noon to use the vaginal syringe, for the lotion, and only then was the fatal error learned. 12.45 P.M.—Visited; pulse 100; temp.  $97^{\circ}$ ; very irregular cardiac action; excessive pain in præcordium, over epigastrium, and in left shoulder; face very pale; tongue blistered on left side; loss of voice, and very hoarse; vomiting yellowish mucus with specks of blood; no smell of the acid in the vomit. Ordered  $\frac{3}{4}$  of a glass of olive oil, three raw eggs, barley-water, and bicarbonate of soda, milk, also strong coffee, and magnesia and milk; turpentine stupes over heart and stomach. 1.45 P.M.—Pulse 104, very weak and irregular; temp.  $100^{\circ}7$ . 2.30 P.M.—Pulse 104, stronger; temp.  $102^{\circ}4$ . Desire to micturate; catheterization produced  $1\frac{1}{2}$  pints of dark greenish-brown urine. The pain being still most violent, and no narcotism present, I injected hypodermically 10 minims of acetate of morphia solution. She was directed to suck and swallow ice. As my services were urgently needed elsewhere, Dr Millard kindly visited my patient at 4.15 P.M. His note was, “Pulse 158; temp.  $105^{\circ}$ ; profuse perspiration, and pain in præcordial region.” 6.40 P.M.—Pulse 144; temp.  $103^{\circ}7$ ; respiration, 22. No narcotism; perfectly conscious; flushed; less pain, except in left shoulder and with deep inspiration. Taking eggs and milk freely. Injected  $\mathfrak{M}$ xx. of æther sulph. Ordered sol. calcis saccharat. with milk, also an enema of quiniæ sulph. gr. xx., acid sulph. dil.  $\mathfrak{z}$ j., aq. ad  $\mathfrak{z}$ ij., to be given with half an ounce of

whisky, beef-tea, and raw eggs; in all a pint. 7.45 P.M.—Pulse 120; temp.  $103^{\circ}5$ ; less flushed; perspiring; enema retained; urine, sp. gr. 1030, containing one-fifth albumen.

27th.—1 A.M.—Pulse 116, very compressible; temp.  $104^{\circ}$ ; resp. 24. Has had no chills. Feels hot; sweating profusely; been sleeping. Pain over heart, increased with inspiration. Tongue clean and moist; very thirsty. Flatulent and inclined to defecate. Urine of dark colour voided naturally. Uterus carefully examined; tenderness on left side elicited with deep pressure. Has taken half an ounce of well-diluted whisky every hour. Egg and milk and barley-water alternately. Prescribed quiniæ sulph. gr. x. p. enema at 2 A.M. and again at 5, to be mixed with beef-tea, eggs, milk, and whisky. A teaspoonful of whisky, diluted, every hour. At 1.45 A.M., after the administration of a preliminary hot-water rectal injection, there was a light-brown action of bowels.

5.5 A.M.<sup>1</sup>—Temp.  $102^{\circ}5$ . Diarrhœa, for which opium and camphor pill was given, and checked it. Urine voided easily.

11.20 A.M.—Pulse 104; temp.  $102^{\circ}2$ . Has “a severe stitch” in left side. No friction cardiac sound heard. Continue nutrient enemata, with starch if needed. Warm vaginal douche recommended. “℞ Quiniæ sulph. gr. xxxv., acid. sulph. dil. ℥ij., tr. digitalis ℥j., glycerini ℥j., aq. q.s. ad ℥viiij. Ft. mist. ℥ss. tert. quaque hor.”

4.20 P.M.—Pulse 112; temp.  $102^{\circ}5$ . Lying on side. Taking nourishment freely. Sharp præcordial pain. Signs of pericarditis clear. Injectio hypoderm. of ℥xx. æther sulph.

9.20 P.M.—Pulse 120; temp.  $103^{\circ}7$ . Clammy sweats of distress. In addition to pain and dulness over heart, there are now symptoms of left pleuritic effusion. “℞ Chloral hydrat. ℥iss., potas. bromid. ℥j., syr. lemon. ℥vij., aq. calc. q.s. ad ℥ij. Sig., Sem. part. ex aq. pro haust. som.” Blisters to be applied over left chest and heart. Enemata of quinia, etc., as formerly.

28th.—5.40 A.M.—Pulse 116; temp.  $104^{\circ}5$ . Tongue dry and brownish; inclination to vomit. Had slept three hours after draught. Prescribed ℥xx. of sol. terebinth. every two hours, to be taken from milk.

11.40 A.M.—Pulse 108; temp.  $103^{\circ}5$ . Severe pain in lumbar region over kidneys. Has twice passed yellowish mucus-like membrane when urinating.

4 P.M.—Pulse 108; temp.  $103^{\circ}2$ ; resp. 20. More shreds of mucus; urine contains bloody-like particles, but for first time since accidental dose seems otherwise natural in appearance.

9.40 P.M.—Pulse 112; temp.  $101^{\circ}8$ ; resp. 28. Looks very much exhausted; lying on back; “sweats of distress.” Injected ℥xx. of ether and applied modified ice-cap.

29th.<sup>2</sup>—4.30 A.M.—Temp.  $101^{\circ}$ . Taking ℥xx. of turpentine

<sup>1</sup> Noted by nurse.

<sup>2</sup> Noted by attendant.

every three hours; slept fully an hour continuously, and fitfully for ten minutes frequently.

9 A.M.—Pulse 104; temp.  $102^{\circ}$ ; resp. 30. Tongue moist; very sharp pains in right side. The blisters applied have acted well.

4.45 P.M.—Pulse 124; temp.  $104^{\circ}3$ ; resp. 24. Taking iced milk and chicken tea, etc. Severe pain both sides of chest. No examination thought advisable in present state. Poultices to be applied to chest. Stop turpentine; re-ordered the aconite mixture, and to have a clyster of turpentine oil and hot water.

9.35 P.M.—Pulse 116; temp.  $103^{\circ}5$ ; resp. 24. Motion with enema. Slight rigor about six o'clock; flatulent.

11.30 P.M.<sup>1</sup>—Pulse 116; temp.  $103^{\circ}5$ ; resp. 38. Night draught as before. Slept three hours.

30th.<sup>1</sup>—4.30 A.M.—Pulse 112; temp.  $103^{\circ}5$ ; resp. 36. Took a pint of milk during night. Natural action of bowels. Urine light in colour; thick sediment.

8 A.M.—Pulse 110; temp.  $103^{\circ}$ ; resp. 24. Chest, especially on left side, shows symptoms of pleuro-pneumonia. Cardiac action interrupted and irregular; bruit with first mitral sound. "R Sol. ferri muriat. (Ed. Ph.)  $\mathbb{M}$  xxv.; ii. quaque horâ."

10.20 A.M.<sup>1</sup>—Pulse 116; temp.  $104^{\circ}$ ; resp. 36. Lime-juice cordial given, cocoa, switched egg and milk.

12.20 P.M.—Pulse 114; temp.  $103^{\circ}1$ ; resp. 30. Seen again at 1.30, when the condition was the same, being pulse 116; temp.  $103^{\circ}6$ ; resp. 36. Discontinued aconite, and has been again taking plain quinine mixture. Ordered a wet pack for ten minutes. 2.50.—In pack.

3.5 P.M.<sup>1</sup>—Pulse 114; temp.  $101^{\circ}$ ; resp. 30.

6.20 P.M.—Pulse 114; temp.  $104^{\circ}2$ . Tongue dry. Has taken four spoonfuls of milk and whisky. Repeat pack.

8 P.M.<sup>2</sup>—Pulse 126; temp.  $104^{\circ}2$ ; resp. 40. In pack forty minutes. Observation in pack—Pulse 125; temp.  $103^{\circ}2$ . After being in bed 24 minutes, pulse 122; temp.  $103^{\circ}$ ; resp. 36. Inclined to sleep.

10.10 P.M.—Pulse 120; temp.  $103^{\circ}7$ . Uterus examined; feels quite normal; os admits point of one finger. There is a doughy swelling felt between uterus and bladder on right side. No pain on bimanual uterine pressure. Complains of a "dry tenderness" in throat. Ordered the iron to be given every four hours, and the quinine mixture every two. Hypodermic inject. of ether as before.

31st.—2.45 A.M.<sup>2</sup>—Pulse 118; temp.  $102^{\circ}5$ ; resp. 36.

6.20 A.M.<sup>2</sup>—Pulse 126; temp.  $104^{\circ}7$ ; resp. 40.

8.20 A.M.—Pulse 125; temp.  $104^{\circ}$ ; resp. 42. Slept only one hour during night. Severe pain in right chest. Skin is very tender. Application of cold-water cloths to side.

9.50 A.M.<sup>2</sup>—Pulse 134; temp.  $104^{\circ}2$ ; resp. 46.

11.15 A.M.<sup>2</sup>—Pulse 140; temp.  $104^{\circ}3$ ; resp. 36.

<sup>1</sup> Noted by nurse.

<sup>2</sup> Nurse's observations.



1.45 P.M.—Pulse 120; temp.  $103^{\circ}7$ ; resp. 36. Slept an hour before visit. Has no pain. No vomiting. Natural micturition; dark sediment in urine.

10 P.M.—Pulse 120; temp.  $103^{\circ}2$ ; resp. 30. Aspirated the swelling in the region of the right broad ligament, and drew off fully 2 oz. of serous fluid containing dark particles. Hypodermic inject. of ether. Stop iron.

11.30 P.M.<sup>1</sup>—Pulse 118; temp.  $102^{\circ}5$ ; resp. 28.

1st November.<sup>1</sup>—1.55 A.M.—Pulse 117; temp.  $102^{\circ}6$ ; resp. 30.

4.45 A.M.<sup>1</sup>—Pulse 114; temp.  $102^{\circ}2$ ; resp. 42. Severe pain recommenced in right side about 3 A.M. Applied cold-water cloths. Slept two hours. About 1 A.M. had a naturally passed, hard, lumpy, blackish stool (iron).

6.30 A.M.—Pulse 116–130, very irregular; temp.  $103^{\circ}$ ; resp. 43. Quinia, which had been given every hour since last night, to be given every two hours.

9.25 A.M.<sup>1</sup>—Pulse 125; temp.  $102^{\circ}5$ ; resp. 27.

12.35 P.M.—Pulse 114; temp.  $101^{\circ}6$ ; resp. 26. Slept three hours since 9.30. Heart-sounds clearer. Distinct pleuritic friction on right side.

From 2.35 to 7.35 P.M. four observations were made by nurse. The pulse was about 130; the temperature from  $101^{\circ}6$  to  $102^{\circ}4$ ; the highest respiration 49.

9.40 P.M.—Pulse 129; temp.  $103^{\circ}3$ ; resp. 40. Lying very prostrate; bronchial râles all over chest. Has vomited mucus. Taking some nourishment. Prescribed ammon. carb. gr. v. iii. q.q. horâ, and brandy *ad lib*. Injection of ether as formerly.

2nd November.—7.30 A.M.—Pulse 120; temp.  $103^{\circ}5$ ; resp. 40. Has taken two eggs, beef-tea, half pint of brandy, etc., since last visit. Now lying on back; very pale and pinched in features; cold, clammy sweat on brow. Moist mucous râles all over chest. Expectoration of frothy saliva and mucus from throat. Delirious through night. Urine again dark in colour. Quite sensible. Asked me, "When will I get up?" and said to her nurse, "Don't tell the doctor I took off the poultice." She died very quietly about 9.45 A.M.

REPORT TO PROCURATOR-FISCAL ON CASE OF MRS B.—Reviewing the history of the case, we find—1st, That the patient had a difficult labour on 21st October. 2nd, Subsequent to this there was an attack of inflammation of the womb (metritis), which was established on 23rd October. 3rd, In consequence of the remedies employed she improved from 25th October up to the morning of the 26th. 4th, On 26th October, at or about 7 o'clock A.M., she swallowed part of a solution composed of carbolic acid mixed with glycerine and water, and intended to be used as a vaginal wash; and again, about 9 A.M., a smaller quantity of the same,—in all, about 50 drops

<sup>1</sup> Nurse's observations.

of the acid. 5th, When visited by me on 26th October at 12.45 P.M., certain symptoms of collapse were evident, which symptoms corresponded to those recognised to be due to an over-dose of carbolic acid, viz., pallor of the face, depression of temperature, nausea, undue weakness and restlessness, with acute pain over the regions of the heart and stomach. There was also a blister on the tongue, and loss of voice, showing that some corrosive had been swallowed. 6th, Such remedies as are generally recommended under the circumstances were immediately given, e.g., olive oil as a vomit; afterwards raw eggs, barley-water, magnesia, and soda. Strong coffee was given as a stimulant, and turpentine cloths applied externally. 7th, By 2.30 P.M. on the same day the symptoms were distinctly febrile, and these increased rapidly in severity. 8th, During the day, and as soon as it could be procured, the recognised antidote for carbolic acid—sulphuric acid—was given, in combination with quinine. 9th, On 27th October there was evidence of effusion into the heart sac (pericarditis), and in the evening left-sided pleurisy. 10th, Some mucoid membrane was passed, which seemed to come from the bladder.<sup>1</sup> 11th, On 29th October the right side of the chest was attacked with pleurisy. 12th, On 30th October the substance of the lung was also involved (pleuro-pneumonia). 13th, On the same day there was discovered, by vaginal examination, a swelling, which on the evening of the 31st October was opened by aspiration, and proved to be the affection known as “serous encysted perimetritis.” About two ounces of watery fluid, containing blackish particles (presumably due to carbolic acid), were drawn off. 14th, She improved a little, but had recurrence of severe pain in the right side of the chest on the morning of 1st November. Towards the evening of this day bronchitis set in. 15th, Appropriate treatment was ordered, but she succumbed on 2nd November.

The principal questions of interest in the case are—

A. *What is the minimum poisonous dose of carbolic acid? or what is the safest maximum dose?*

B. *Did the woman die of carbolic acid poisoning?*

C. *What influence had the previous illness and applied treatment on the termination of the case?*

A. Different cases might be quoted in which a small dose of this drug proved noxious. Repeated washings out of a joint or sinus with a five per cent. solution have been known to prove fatal. Still weaker solutions have been toxic to children. But in none of these cases can it be determined how much carbolic acid remained in the system. The application of Lister's carbolic dressings to wounds, or the exhibition of the carbolic spray at operations, has caused dangerous symptoms. In the treatment of large burns equally serious results have been noted. On the

<sup>1</sup> Afterwards referred to.

other hand, Professor Lister denies that he has ever seen fatal results from its use in medicinal quantities. M. Raymond, in treating typhoid fever, prefers giving doses of about 15 grains daily, of which  $7\frac{1}{2}$  are given by enema; and this method he contrasts with the former one of ordering 150 to 180 grains daily, which seems to have been recommended by other French physicians. I presume that these excessive doses must have been given in great proportion by enemata. Giving 30 grains daily, Raymond found toxic symptoms, shown by fall of temperature, convulsive tremblings, etc. Bintz states that 30 grains may be given with impunity within fourteen hours. Dr A. Keith, writing in the *British Medical Journal*, 7th March 1868, "On the Internal Administration of Carbolic Acid in Zymotic Disease," mentions he has prescribed it in several hundred cases with great advantage; he ordered 5 or 6 drops every four hours. Vaginal and uterine washes of the acid have been extensively used since 1869, in watery solutions of various strengths, from 1 in 20 to 1 in 100. In certain puerperal conditions it is employed as strong as 1 in 4 of oil, as suggested by Dr P. Eade.

The action of carbolic acid is greatly modified by glycerine. From 5 to 12 minims of the "glycerine of carbolic acid" is a dose; 1 to 3 grains of the acid is recommended when prescribed in pills.

B. In considering whether the administration of the lotion caused death or no, we have to note:—1st, No severe symptoms of poisoning were observed, such as narcotism or convulsions; but the, so to speak, minor symptoms were present five hours after the drug had been swallowed; and these symptoms persisted more or less throughout the subsequent illness.

2nd, Although, to some extent, the severe inflammations might have been attributable to other causes, the incidence of the severe chest pain shortly after the dose of the lotion must be regarded as a proof of the "on account of" as well as "after" effect of the drug.

3rd, The acid first caused a burning of the covering of the tongue, throat, and stomach. Thereafter gastric disturbance and irregular heart's action, etc., were experienced.

4th, The administration of the lotion did not prove fatal within a reasonable time, regarding the lotion as the sole lethal agent, but various inflammations subsequently supervened.

I believe that, despite the swallowing of 50 grains of carbolic acid, with possibly some previously retained in the system, and the subsequent inflammations of the heart's covering and of the lungs, recovery would probably have taken place had not bronchitis set in. Whether the bronchial affection was occasioned by the unfortunate dose I cannot definitely determine; I think not.

C. In estimating the importance of the previous condition and



applied treatment, the following points demand notice. In stating these it will be convenient to consider the latter first.

1st, A mixture of carbolate of quinine had been prescribed on 25th October, the day previous to that when she accidentally received the dose of the aforesaid lotion. Of this mixture she ought to have got from seven to nine doses, roughly about 20 to 25 drops of carbolic acid, which would be modified by the quinine, forming a carbolate of quinine. It is stated that, at times, carbolic acid may be retained in the body for a long period, but, as a rule, according to Binnedik, the elimination is rapid; poisonous symptoms are developed soon after the introduction of the acid, and disappear before the whole quantity has been eliminated. Under favourable conditions the elimination is complete in twelve or sixteen hours. Probably a small quantity of the acid ordered in the mixture remained in the system when the larger doses were administered; but practically this fact is not of much moment.

2nd, It is probable, though in no way proved, that some kidney congestion, or possibly worse affection, was present. It is known that carbolic acid exercises a baneful influence on persons thus conditioned. An attack of inflammation of the womb following a severe delivery would cause an individual to be much more susceptible to the hurtful effect of an excessive dose of the drug than under ordinary circumstances. Drs Langenbach and Sonnenburgh in 1879, writing on the "Treatment of Carbolic Acid Poisoning," state, "Adults suffer chiefly from nausea, vomiting, and headache; in the case of children there is collapse, often preceded by restlessness and excitement." Mrs B., owing to her extremely weak condition, in some measure resembled the latter.

3rd, The fact of fully five hours having elapsed from the giving of the lotion to the time I saw the patient also greatly lessened the probability of a favourable termination.

4th, The inflammations of the serous coverings formerly referred to were unquestionably modified by the puerperal condition. To what extent they were puerperal proper, to what due to "carbolism," cannot be determined with precision. From my opportunities of studying puerperal conditions I can testify that there were dissimilarities between cases of septicæmia, pyæmia, puerperal fever, and such like, and the above case of Mrs B., and that these existed to such a degree that I consider myself justified in assuming that "carbolism" had a very considerable influence in determining these inflammations.

I am of opinion that—(1.) The dose of the lotion was highly prejudicial to the existence of Mrs B., the more especially as the carbolic acid was given with little dilution (being one part of acid to one of glycerine and four of water) on an almost empty stomach. (2.) That her confinement and subsequent illness rendered her system very weak, and also prejudiced a favourable

termination. (3.) That the advent of bronchitis was fatal.—Certified, etc.

*Addenda.*—In presenting this case to the Society, a few additional remarks may be allowed me.

Carbolic acid has been given by Surgeon T. E. Worgan, of the 3rd East Indian Regiment, for malarial fevers, in larger doses than we are accustomed to exhibit in this country. Worgan gave gr. xv. of the crystals six times a day. "No vomiting or dyspepsia, though slight relaxation of the bowels was occasionally experienced." By this method gr. lxx. were given daily.

In the early period of the poisoning a hypodermic injection of acetate of morphia was administered. The propriety theoretically of this might be doubted; but, in absence of narcotism, with intense pain, and the absolute necessity, for many clinical reasons, for its relief, I hold that my procedure was right. Dr Bristowe writes regarding the treatment of meningitis, "Opium is generally considered to be contra-indicated; we must confess, however, we have not infrequently administered it during the earlier stages of meningitis, not only without obvious injury to the patient, but with manifest relief to his irritability and insomnia."

I preferred to use sulphuric acid as an antidote, instead of sulphate of soda as recommended by Sonnenburgh, and this on account of the probable diarrhoea which would have been caused by the latter. In a patient only recovering from metro-peritonitis, diarrhoea is always to be regarded as unfavourable. Both the acid and its salt would form a phenol-sulphuric acid, which Bauman regards as non-poisonous to animals.

Dr A. E. Sansom's article<sup>1</sup> "On Carbolic Acid and its Compounds" contains what may be here regarded as an "application" of my deductions, that we, in view of the uncertainty and possible dangers attending the medicinal use of the drug, should find a substitute for it. Sansom recommended the sulpho-carbolates; I prefer carbolate of quinine. The sulpho-carbolates are cheaper and safer, yet much less efficacious, than the quinine salt. For post-partum washes, etc., we have for several years used boracic acid and permanganate of potas., as well as carbolic acid. Considering the risks of the last-named, perchance it would be wise to use the two former only, despite some objections which pertain to them.

It will be noticed I laid considerable stress, in my report, on the bronchitis. I have asked myself whether the cold-water packing had anything to do with it, or if it was simply an extension of the pre-existing pleuro-pneumonic inflammation; or was it of septic origin? I have observed bronchitis several times as an unwelcome and fatal attendant on puerperal illnesses under diverse conditions.

<sup>1</sup> *Practitioner*, July 1869.



It is regrettable that I cannot record the post-mortem appearances; for this blank I own myself principally to blame, as, shortly before the funeral, I was asked by the authorities to make an autopsy. I declined, owing to the facts, that at best the examination must have been hurried and perfunctory, unless the interment had been seriously delayed; besides, I had little hopes of finding more definite data than had been clinically established, as, from what is known pathologically of the post-mortem conditions in carbolic acid poisoning and in deaths from high temperatures, I was convinced little would have been elicited without the exercise of greater pathological experience than I dare claim. I presumed, also, that unless a thorough chemical analysis of the tissues had been made, a post-mortem would be of small value. Furthermore, no criminality was attributed to any one, and the feeling of the district, which would have been strongly averse to the postponement of the funeral, elicited my sympathy.

The mucous membrane which was passed with the urine was in largish shreds. I sent the specimen to a friend for pathological examination; but, unfortunately, he has not yet found time to report on it, beyond stating verbally that, from the microscopic appearances, it seemed cystic.

Since the above was read I have a letter from Dr Woodhead, in which he modifies this opinion. He writes, "I found that the matter is made up (1) of epithelium, partly (*a*) from the urethra, but the greater part from (*b*) the vagina. Along with this there is (2) some fibrin, and also a few rounded nuclei, which appear to be surrounded by no protoplasm, probably leucocytes. The cast is, then, evidently from the vagina for the most part, but there is also some part from the urethra."

In view of what Mr Maxwell Ross related during the discussion on my paper it would have been interesting to find more pathological testimony in support of the cystic nature of the membrane. Still, as Dr Woodhead only got part of what was passed, it is possible that, had an examination of the whole matter been made, a greater proportion of bladder membrane might have been found.

I have to acknowledge much indebtedness to Professor Billroth's article on "Carbolic Acid Poisoning," contained in the New Sydenham Society's translation of his *Clinical Surgery*, and beg to refer those who have not studied this excellent work to it for fuller particulars than I could embody in my report.

I have not attempted to go thoroughly into the literature of my subject, but, glancing at the *Medical Digest*, I see that poisoning from the drug has been more common than I supposed, and that recoveries have taken place after even larger doses than my patient swallowed; yet these are very exceptional, and, with the preceding illness, I think it a matter of some congratulation that my patient lived so long as she did.



## VI.—TREPHINING AS A PREVENTATIVE AND CURATIVE MEASURE.

By J. A. MACDOUGALL, M.D., Carlisle.

*(Read before the Border Counties Branch of the British Medical Association at Keswick, 6th July 1883.)*

GENTLEMEN,—I thank you heartily and warmly for the honour you have done me in electing me your President, and I trust that the fresh year of work upon which we are entering may be as full of endeavour and of success as some of those have been which have preceded it. The roll of your former presidents is not a long one, and yet even in it, as in many shorter lists, there is a blank,—death has claimed his share. One who spoke from this chair a few years ago is no longer here to speak or to listen. His place—and his place was very emphatically the city of Carlisle—knows him no more. Dr Robert Elliot died on the last day of 1882, and by his death left a gap not easy to fill. For nearly forty years, for half the space of man's allotted life, he laboured there, and his works follow him. Few of us, and none who really knew him, I think, will readily forget the quick, keen brightness of his eye and the wonderful fluency of his speech, outward evidence alike of the strong observing power, the marked ability, and the wide culture and knowledge of the man. But as I knew him in a slight way as compared with some who are present, and in a very widely different way from that of his intimate friends, I prefer that one of them should speak; and here is something of what he says. After telling of his earlier days, of the fact that by heredity he was a doctor (for surely, if physical form and feature be the inheritance we know it is, then why should not the impress in mental development which comes with the cultivation of higher centres be so likewise?), that he was a successful lecturer in the Newcastle School of Medicine, that he was a popular consulting physician and a man of mark, he adds, "Dr Elliot belonged to the best class of philanthropists, who have the sagacity to perceive that the only efficient way of helping the poor and ignorant is by teaching them to help themselves. To him was chiefly due the establishment of the Working Men's Reading-Rooms in Carlisle. This institution was founded at a time when the education of the industrial classes was regarded with less favour than now, and when it was reserved to such far-seeing men as Lord Brougham—who, by the way, took great interest in Dr Elliot's projects—to recognise the advantages resulting from the spread of knowledge amongst the lower strata of society." Not in vain has a man lived of whom such a record can be written; and though, doubtless, "names of men and places soon lose their meaning, in the process of years their memory dies as the sunlight dies from off the hills," still with some there is a

comparative permanency, and in Cumberland it will be long, long ere the name of Dr Robert Elliot is forgotten.

But this is not all our loss; age, experience, and usefulness reckon not with the fell reaper. In the *British Medical Journal* for the 31st of March there is this announcement:—"On 2nd January, at sea, on board the ship 'Alexander Duthie,' J. Kendal Burt, M.B., of Kendal." To us this told of the loss of a most painstaking and able secretary, and of a gentle and pleasant fellow-labourer. Only upon one occasion had I the pleasure of meeting Dr Burt—at our annual gathering last year; but the business-like manner in which he performed the duties of his office, and, withal, the discretion and ability he displayed, impressed me much. I know that he was respected in the district in which his life's work lay, and that there, as well as with us here, his name is now held in revered and fragrant memory.

With the honour you have conferred upon me comes the pleasant responsibility of saying somewhat to you in the way of an address; and here I have had confessedly no little difficulty. My predecessors, all able and thoughtful practitioners, have, as a rule, found the subject of their remarks in the special walk of their profession; and so thoroughly have they gleaned the field, that it has been difficult for me, coming after them, to tell you aught that is new. But, happily for the human race, the progress of medicine is on the advance. Happily, I say, because I confess to a belief in the doctrine of the probable evolution of new diseases, and that it possesses strong ground for its acceptance. To most of us who have followed our profession with the pleasure and the interest which its true practice fortunately carries, this thought must, I believe, have occurred, that certain diseases are more numerous and more familiar to us than they were twenty years ago, and notably I would mention diseases of the nervous system. These, however, do not stand alone. The interesting and most suggestive "Bradshaw Lecture,"<sup>1</sup> of Sir James Paget, brought more fully into prominence and recognition a doctrine the key-note of which he struck many years ago in his essay upon "Notes for the Study of some Constitutional Diseases."<sup>2</sup> There he says, "We are ready to speak as if we believed the heritable diseases of our pathology were always such as they are now; but there is no sufficient historic evidence for this belief, and the general rule of variation of forms in hereditary transmission makes it improbable. I think, indeed, that historic evidence would suggest the belief that in some instances, even within the life of history, diseases have been greatly modified in hereditary transmission, and some which were once prevalent and well marked are now scarcely to be recognised, while others, if they existed in times far off, existed in some form very unlike

<sup>1</sup> *On Some Rare and New Diseases*. The Bradshaw Lecture, delivered at the Royal College of Surgeons of England in 1882.

<sup>2</sup> *Clinical Essays and Lectures*, p. 362.



what we now see." This in the past; but now to-day, in the light of a richer and fuller experience,—mayhap the richest experience of living surgeon,—he says,<sup>1</sup> "drawing attention to a certain group of diseases of which there seems reason enough for believing, first, that they were lately new diseases and have become more frequent; and, secondly, that they are due mainly to morbid conditions changing and combining in transmission from parents to offspring." And again, "But however much of what seems to be new we may justly ascribe to our previous oversight of what was old, there yet seems to be evidence enough that new diseases are in progress of evolution, and that, as I have said, some of the rare diseases of which I have to speak are the earliest instances of the new."

This from a master mind demands our highest attention; all the more so when I repeat what I have already said, that to some of us at least the recognition of evolution in disease, or rather increase in previously rare disease, has already, feebly it may be, but distinctly, come. Take, for example, exophthalmic goitre. In a comparatively short and limited experience I have seen a considerable number of cases. Dr Wickham Legg<sup>2</sup> tells us that the first known case was recorded by Parry in 1786, years before the time of either Graves or Basedow, with whose names it is now familiarly associated. That a disease possessing such remarkable features as this does should, had it existed to the same extent that it does to-day, have escaped observation and record is, I think, unlikely, and I would incline to regard it as one of those which have probably been on the increase. Fifteen years ago I had the privilege of meeting the late Dr Warburton Begbie in consultation in a case of what I know now was one of pernicious anæmia. It was the first I had ever seen, and was to me quite a puzzle. The steadily increasing debility, the fitful vomiting and diarrhoea, the growing pallor, all seemed to point to organic disease, and yet it evaded detection. Dr Begbie's remark, as regarded the diagnosis, was this, "I have seen, from first to last, about six cases such as this is. I do not know what it is, except that it is a cachexia, probably a malignant condition of the mucous membrane of the intestinal tract; but of this I can speak with certainty, that the patient will die—the others all did." It seems to me that had he, fortunately for his profession, been spared until to-day, his opportunities of observation in this disease would very largely have increased. And the pseudo-hypertrophic paralysis of Duchenne. It is but a short time since I met with what, to me, was the first instance of this disease. Now I have the opportunity from time to time of seeing two such cases, and each time I do so the condition they present, the big muscles, and albeit their feebleness, impress me

<sup>1</sup> *Bradshaw Lecture.*

<sup>2</sup> "Note on the History of Exophthalmic Goitre," *St Bartholomew's Hospital Reports*, vol. xviii. p. 97.



with the feeling how strange such an association is, and how difficult it would be to overlook it.

But all this by the way. I merely mention examples of three diseases which occur to me as fair instances of apparent increase in frequency ; but it is quite possible that it may only be in their readier recognition. That new diseases should arise, while old diseases decrease and maybe disappear, is but what happens to much else that is mundane. The circumstances of life and its surroundings are far from stationary. Those of to-day differ widely from those of fifty years ago ; and if disease be, as it unquestionably must at times be, the result of such conditions, then there seems less reason for wonder that with changes in probable origin, the results should change also. Watchful, then, as we surely must be, not only of the growth of new disease, or of change in the old, but of the means by which we can best meet the results of such growth and change, it has occurred to me that I might, for the time that is before us, direct your attention with some little interest to what appears to me as one of the *surgical aspects* of nervous disease. And on the threshold of my thesis I would venture to give some of the reasons which make me believe that in the social state of our time there exist certain conditions which predispose especially to the development of nervous ailments. And first, as to the difference in education. The struggle for life nowadays is no easy one, and too often by competitive examination only can the race be entered on. To male and female alike this applies, and the pressure to attain certain high standards falls with equal force on either sex. The nervous system of the female, less stable in some respects than ours is, bears the strain badly, and physical deterioration, with very marked nervous instability, are too often the direct results. Such results readily become, through maternity, a bad heredity, laying such a foundation that with, say, a syphilitic tendency grafted upon it, it is easy to understand how the development of organic nervous disease may be a direct issue. And drunkenness, this, playing as it does a large part in the production of such mental and nervous failures as meet us every day, demands careful consideration. That the vice is on the decrease statistics assure us ; and yet that the class who indulge in it most freely have increased in past years there can, I think, be little doubt. The multiplied facilities for traffic, the enormous development of certain mining and manufacturing works, the higher wages obtained, and a certain sad-sided luxuriousness thereby induced, have all tended to its wider development. Take as an instance the carmen of London. No one who has read Mr Savory's note, in the *Lancet* of the 31st March, on "A Phase of Intoxication," could fail to be impressed by it and the graphic sorrowfulness of the record. That this class of men has increased considerably within the last twenty years is, I fancy, unquestionable, and that with that growth there must have come a direct in-

crease in drunkenness. Large employers of labour, and officers in Her Majesty's service, of whom I have made inquiry on this point, inform me that their observation leads them to believe that within the last few years drunkenness has been steadily on the decrease; that previously (fifteen to twenty years ago), however, it had very much increased, and, in the case of the labourer, increased in a class who, with a lower rate of wages, had formerly been unable to indulge in it. But the benefit which will come of this decrease in drunkenness is largely a benefit to a generation of very recent growth, for the drunkard himself is often not the greatest sufferer. Popular opinion has long had it that many imbeciles, epileptics, and weaklings are the issue of dissipated fathers begotten during intoxication, and there is some foundation for this belief. Illustrative of this are some observations of Frederichs of Heidelberg, the discoverer of the especial form of ataxy which bears his name. "These observations extended over three sets of cases, a brother and a sister whose father had been a notorious drunkard, three sisters whose parents had been industrious and healthy, and three sisters and one brother whose father seems to have been a somewhat remarkable character, who drank heavily, led a fearfully immoral life, and died of consumption. The wife of this man was healthy, but stupid; but she mentioned as a fact that all the four children had been conceived while the father was in a state of intoxication." And nearly akin to alcohol, in its affinity for and destructive effects on nervous tissues, is syphilis. Is this disease on the increase? My experience does not allow of my answering in the remotest way this question. My impression, from what I have seen in hospital practice, is that it certainly has in no wise decreased; and I know that in one large Scotch manufacturing town, where fifteen years ago it was almost unknown, it is now far from uncommon. If it has multiplied there, why should it not do so in similar centres, the rapid growth of which is one of the features of our time? Added to this, I have the testimony of three surgeons practising in rural districts on the Borders, that it is only within the last few years that in their own localities such cases have come under their observation. Such knowledge goes far to establish the belief that the disease has a wider area, though its earlier manifestations may be less terrible and destructive, than they were under the older surgeons. That there are other unknown and unrecognised factors I have no doubt. The late Mr Syme, referring to popliteal aneurism, used to make the remark that he saw few of them in his later days as compared with the early ones, because, as he added, "they disappeared with the post-boys." The quick vaulting into the saddle of a man whose habits too often predisposed his vessels to give way, doubtless afforded that great surgeon the wonderful experience he had in this disease, the story of which was best told when he related how he had tied with success the superficial femoral artery in thirty-six consecutive



cases. That popliteal aneurism is the only disease which has suffered decrease with our changed modes of transit, and that none have arisen to fill its place, is difficult to believe. And the change in the *type* of disease which some of the ablest and most observant of the older physicians of our time insisted upon—may that not have been more due to the changed nervous systems upon which disease was implanted than upon any alteration in its type?

But in all these "guesses at truth" I may be wrong; there may be no increase in nervous disease, only its better and fuller recognition. This much we must admit, and, with the admission, ask ourselves the question, Can medicine or surgery do aught to help or to prevent such ailments? Preventative medicine may; preventative surgery, I imagine, can, and it is to this aspect of the subject I wish now to direct your attention. There are few operations in surgery older than trephining, and there are none which have had, so to speak, more vicissitudes—at one time lauded to the skies, at another treated with very scant justice. The reckless use of the trepan in the seventeenth and eighteenth centuries did much to bring it into ultimate disrepute; and when, spite of the teaching and the marvellous success of Percival Pott on this side the Channel, Desault of Paris lent the weight of his authority against it, the reputation of the operation declined very considerably. Astley Cooper, Abernethy, and Lawrence were of Desault's school, and it is easy to understand how much they influenced English surgery. But, spite of such teachers, the lessons of Pott were not altogether forgotten; the trephine was still in the armamentarium of the surgeon, and its use was from time to time fraught with success. The operative treatment of fractured skull had now, however, become a vexed question, and so it has continued. Equal experience—for I presume a somewhat equal experience—brings to different men very widely different opinions on this matter. Mr J. Hutchinson does not consider it a dangerous operation *per se*, while Mr Holmes certainly does.<sup>1</sup> Let us for a moment consider this. Sédillot in 1876 presented to the "Académie des Sciences" a treatise on trephining containing the result of 106 observations. Of these 106 patients with fracture of the skull, 76 were trephined, and 29 were treated by the expectant method; of these latter, 1 recovered and 28 died; of 77 who were operated on, 29 recovered, while 48 died. In the *Bartholomew Hospital Reports*<sup>2</sup> for this year there is an able, exhaustive, and most interesting article by Mr Walsham on this very subject, and here are some of his deductions. He tabulates 606 cases, with 417 recoveries and 209 deaths,

<sup>1</sup> See discussion at the Royal Medico-Chirurgical Society, following the paper by Mr West "On Trephining in Traumatic Epilepsy," *British Medical Journal*, 1879, vol. ii. p. 865.

<sup>2</sup> "Is Trephining the Skull a Dangerous Operation *per se*?" by W. J. Walsham, *St Bartholomew's Reports*, 1882.



a mortality of 39·3 per cent. These he divides into five classes—1st, preventative trephining, giving a mortality of 21·9 per cent.; 2nd, immediate curative, with a mortality of 27 per cent.; 4th, delayed curative, mortality 58·4 per cent.; and 5th, late trephining mortality 22 per cent. In class five, where the mortality is not so especially high, the operation was undertaken, in the majority of instances, for the relief of affections not in themselves likely to be immediately fatal. But for purposes of even closer analysis he takes all the cases of the operation which have occurred at St Bartholomew's during the last twelve years, 25 in number, and with this result:—Of 7 preventative trephinings, 5 recovered, while 2 died; of 3 immediate curative, 1 recovered, while 2 died; of 7 delayed curative, 4 recovered, and 3 died; and in 5 late trephinings, 2 recovered, and 3 died. Examination as to the cause of death in the ten who succumbed proves pretty conclusively that in eight, death was in no wise due to the trephine, while in one at least of the remaining two it seems very doubtful whether it played a harmful part. As Mr Walsham, however, points out, statistics such as these do not show the percentage of mortality from the operation *per se*. To estimate this, one must look to those cases where it is undertaken for the relief of symptoms and conditions not necessarily endangering life. Of these he has collected 122, with 109 recoveries and 13 deaths, a mortality of 10·6 per cent. And it is well worthy of attention that this mortality is influenced in a very remarkable way by the existence or non-existence of a fistulous tract connected with dead bone, or with a purulent collection within the cranium. Of 83 cases operated on where there was no such tract, 71 recovered and 12 died, a mortality of 14·4 per cent.; while in the remaining 40 cases, where a tract existed, 39 recovered and only 1 died, a mortality of 2·5 per cent. Dr J. Russell<sup>1</sup> of Birmingham has noted 80 cases of traumatic epilepsy, of which 50 were trephined, with 44 recoveries; and Dr J. S. Billings<sup>2</sup> of Cincinnati analyzed 72 cases of epilepsy trephined, with a mortality of 16; while Professor Briggs, an American surgeon, has trephined 28 cases of epilepsy with only 1 death.

These, then, are some statistics in estimate of the danger attending the use of the trephine; but I consider we have other and more instructive ways of judging it—the record of individuals who have performed the operation frequently, and who can personally testify to the result. There are comparatively few surgeons who have had an experience wide enough to aid us in this matter, but I quote from two. Dr Hudson of Redruth, in Cornwall, who, like many practitioners in that part of England, has seen a large number of head injuries, thus writes:—“Without much trouble, more than a score of men could be seen at any time in the im-

<sup>1</sup> *British Medical Journal*, 1865, vol. i. p. 582.

<sup>2</sup> *American Journal of Medical Science*, July 1861.

mediate neighbourhood of Redruth and Camborne, whose skulls, to use the popular phrase, 'had been bored.'” Speaking of the operation, he says, “I may add that a very large percentage of these cases recover; that if death ensue there are generally obvious causes to account for it, such as diffuse injury with laceration of brain substance or fractured base; that in our opinion success mainly depends on an early operation, as soon after the accident as convenient; and that we place the operation in the same category as herniotomy, viz., harmless in itself if skilfully performed, but in most cases useless if delayed until the appearance of symptoms. Too much stress cannot be laid on one circumstance which tells greatly in our favour when we contrast the results with those given in the reports of our large hospitals. I refer to the purity of our atmosphere, or rather its freedom from the common septic ferment—the whole district is daily swept by the Atlantic breezes;” and he thus sums up an interesting paper, “The surgeons have, in these districts, had unusual opportunities for the treatment of head injuries. In compound depressed fracture it has been the invariable practice of the most experienced to interfere without waiting for symptoms. It is believed by those surgeons that no danger whatever attaches to the operation *per se*, and that recovery is the *rule* after trephining operations.” Testimony such as this cannot be readily overborne; it is the record of work done, so to speak, on a field of battle, severe and deadly injury combated quickly, skilfully, and successfully.

But I give you the experience of another—experience gained in a widely different way from that last quoted, but none the less valuable. In the quiet of his laboratory, with a previously sadly fatal record of failure as regards trephining operations, but now, by the light of Lister's genius and with the aid of antiseptics, Prof. Ferrier thus answers my inquiries:—“When I did not use antiseptics, and when I took no particular care as regards dressing, every animal I operated on, except one, died of meningo-encephalitis; but in the experiments which Dr Yeo and I carried out together, under proper antiseptic precautions, there was not a single fatal result, nor was there any inflammation or fever after the operation, with one exception, viz., the first animal (a monkey) operated on. In this case the dressings had been pulled off by the animal soon after their application, and the result was fatal meningo-encephalitis. I have lately performed trephining operations, and instituted lesions in various parts, often of the most severe and extensive nature. Some animals I have lost from shock or secondary hæmorrhage; and I am sorry to say that in two, my antiseptic precautions being defective, signs of inflammation occurred. But otherwise everything has gone satisfactorily, and I look upon trephining in injury of the brain as a thing I can do with the utmost certainty, without the slightest fear of having any secondary inflammation when proper antiseptic precautions are employed. It seems to me



that the mere matter of trephining is one of the most harmless and safe operations in surgery. There is no hernia even where a large opening is made. This only occurs where there is inflammation, and as to the risk of destroying large portions of brain, this *quâ* life is very slight. I can remove without any fear the whole of the occipital lobes at one operation. I may say generally that with antiseptics I have no fear of doing anything inside the skull which is not in itself absolutely fatal, say cutting the medulla oblongata, or the like. What one can do in the monkey might, I think, be safely done in man." That the men thus writing owe their success to a common cause I fully believe. The Atlantic breezes do for the patients of the one what carbolic acid or thymol does for the subjects of the other.

My own experience in the operation is much too limited a one to permit me to generalize from it, but it has been quite sufficient to give me a very strong bias in its favour. I have trephined upon several occasions, and I have observed the cases of others, and my experience is this, that I have never seen a fatal result where the cavity of the arachnoid had not been opened into at the time of the accident, or where there was not a large intracranial effusion; in other words, I have seen no case in which I could attach the smallest blame to the use of the trephine.

Advocating, as I do thus strongly, early and more frequent trephining, it is well-nigh demanded of me that I should state the class of case in which it seems to me that it should be employed. Imperatively in all cases of distinct punctured fractures, and on this point most surgeons are agreed. In all cases of compound depressed fracture. In cases of simple fracture with symptoms of compression lasting beyond such a period of time as renders their presence dependent, in all probability, on depressed bone or intracranial effusion; and in simple fracture where the bone is deeply depressed "endways or edgeways"—where, in fact, the dura mater is likely to be torn or injuriously stretched. But as this point is admittedly a very moot one, I quote to you the teaching of Mr Savory. He writes:<sup>1</sup>—"Much importance is laid upon the question whether the fracture be simple or compound, in standard works on the subject. I think too much stress has been laid upon this point. That it should exercise a certain influence is, of course, perfectly right, for it is not a light matter under any circumstances to convert a simple into a compound fracture, least so where the skull is concerned. But when, on the other hand, the advantage which may be gained by a successful operation is considered, and the imminent peril in which the patient is placed in certain cases if no operation be undertaken, I think that there can be no doubt that the right course to pursue is to cut down upon the bone and explore." Of the value of, and the safety which lies in this doctrine, my own experience has well assured me. In cases of compression marked by con-

<sup>1</sup> *Lancet*, February 1874, p. 147.



vulsive or paralytic phenomena from extravasation of blood, where the position of the injury or the presence of a fissure indicate the probability of laceration of some large vessel, such as the middle meningeal; but even here there is a difficulty, for Duret<sup>1</sup> has shown that local or general paralysis may result from bulbar or spinal lesions due to sudden displacement of the cerebro-spinal fluid, and this renders it difficult to draw conclusions as to the exact situation of lesions after head injuries. And lastly, in cases of intra-cranial suppuration, where the symptoms and the presence of a puffy tumour, or unhealthy condition of wound or bone, mark the probable position. And here I believe localization may help us. But of this more anon.

In the case of children, however, there are comparatively few head injuries which demand surgical interference. Their power of accommodation as regards the disturbed relation of the cranial contents is in them a marked peculiarity. And as bearing upon the danger of the remote effects it is well to remember an opinion of Charcot.<sup>2</sup> He believes that the effects of cortical lesions in early life are not quite the same as similar lesions in adult life, as the function of the cortical centres are not distinctly defined and differentiated for some time after birth.

(To be continued).

## VII.—EXTRA-UTERINE GESTATION.

By WILLIAM ALEXANDER FREUND, Professor of Midwifery in the University of Strassburg, Honorary Fellow of the Obstetrical Society, Strassburg.

(Translated from a German communication to Professor Simpson, by David Smart, M.B., Buchanan Scholar, and read to the Edinburgh Obstetrical Society, 27th June 1883.)

I HAVE chosen Extra-uterine Gestation as the subject of this communication, because I myself have seen no small number of cases of this anomaly, and have thus learned what points are yet obscure in our knowledge of the same. This obscurity excites our interest, and at the same time renders it the duty of every one who is in a position to acquire more light to bring even the smallest contribution to the knowledge of his fellow-workers. I trust to be able to lay before you a small contribution of this kind. Let me, then, in the first place, set before you the material from which I have drawn my conclusions on some of the important points on the subject of extra-uterine gestation. I divide the cases which I have observed into two groups: the first includes those cases in which the extra-uterine gestation has been either spontaneously or artificially interrupted by the death of the fœtus

<sup>1</sup> *Traumatisme cérébraux*, These 1878.

<sup>2</sup> *The Localization of Cerebral Diseases*, Ferrier, p. 80.

before the normal termination ; the second the cases in which the pregnancy has reached the normal termination with complete development of the child.

To the first group the following cases belong :—

CASE I.—Mrs S., of feeble constitution, 32 years old, suffered from dysmenorrhœa when a girl ; married nine years ago ; had a tedious abortion and a subsequent attack of pelvic peritonitis eight years ago, and has been for several years, at intervals, treated gynecologically for the results of this illness. In September 1868 she missed her menstrual period, and in the beginning of October, with great general suffering (high nervous irritability, weakness, severe pains in the region of the abdomen and pelvis), a distinctly palpable swelling appeared on the right side close to the enlarged uterus, which, in the beginning of November, was about the size of a man's fist, tense, ovoid, and very sensitive. It came close up to the uterus, which was pushed to the left of the middle line and enlarged to twice its normal size, while its upper extremity passed upwards a little in front of and higher than the uterus ; below this it descended by the right side of the uterus, and its lower extremity reached the pouch of Douglas. On the 8th November a severe attack of pains ensued, which, proceeding from the right inguinal region, spread over the whole abdomen, severe vomiting, faintings, pallor, from rupture of what we had diagnosed as the sac of a tubal pregnancy. Nevertheless the woman recovered in a few days from this threatening condition, and was kept in bed under careful watching and diet till the 22nd November. On this day, when she was accidentally unwatched, the patient was seized by a great desire to go to stool, rose from the bed, and during the effort of defecation fell from the night-stool to the floor in an unconscious state. I found the woman in the well-known condition of an attack of internal hæmorrhage, with a rapidly developing acute peritonitis. After four months the patient was able to leave her bed. The whole posterior part of the pelvis was occupied by an uneven cicatrized mass, most marked on the right side, which fixed the uterus in front and to left side. In two months more, during which the milk treatment and salt-water baths were employed, the menses again made their appearance. The uterus was now found to be elongated, fixed and drawn backwards towards the right side of the pelvis by a firm cicatrized mass of irregular consistence.

CASE II.—Mrs F., very stout, innkeeper, 30 years old, bore a living child ten years ago ; after artificial expression of the placenta puerperal fever set in, which confined the woman to bed for two months. In January 1869 menstruation—which, although extremely small in amount, was always regular—ceased, and the subjective phenomena of pregnancy made their appearance. These, especially the vomiting and urinary troubles (agonizing ischuria and dysuria),



rose in the end of February to a marked degree. At last the woman spent day and night in a miserable manner, suffering from uninterrupted pains and a constant desire to micturate, and became very weak. The examination on February 25th showed plentiful colostrum in the well-developed breasts, and the abdomen swollen, with more decided prominence of the right inguinal region. Here a slightly bulging tumour appeared on percussion and palpation. The anterior vaginal wall was seen to be pushed downwards; the urethral canal projecting; the soft, swollen, and somewhat enlarged uterus bent backwards and to the right side—its left border was easily felt; the left ovary, slightly increased in size, could be felt high up on the pelvic wall and movable. The right uterine border lay so close to a swelling that one could not distinctly define it. This tumour was extremely painful to the touch, and lay firmly upon the anterior surface of the uterus; it was larger than the first, and spread upwards and to the right above Poupart's ligament. Here, apparently, it was firmly adherent to the anterior abdominal wall. In order to interrupt the course of this right-sided tubal gestation (as it was diagnosed) an exploratory trocar of medium size was introduced into the tumour close above Poupart's ligament. There flowed from it about a teaspoonful of a thin, pale red-coloured fluid, which could not be farther examined. Immediately following this there set in, with high fever, an attack of pelvic peritonitis, the inflammatory irritation spreading to the abdominal peritoneum. The exudation which filled the right inguinal region and the pouch of Douglas was reabsorbed very slowly. After six months there still remained in the position of the tumour a firm, hard swelling, about the size of a child's fist, somewhat sensitive to the touch.

CASE III.—Mrs L., of spare build, 28 years old, as a girl remarkably healthy, married at 24, at 26 has born a full-time child naturally, and passed through a healthy puerperium. In July 1873 the menses did not appear. After five weeks a slight discharge of blood occurred with slight labour pains, remarkable bodily and mental depression, loss of appetite, and sleeplessness. Within the next three weeks improvement of her health took place. During an outing the woman was suddenly seized on the street with violent pains in the lower part of the belly, and an attack of weakness resembling fainting fits. There was expelled, amidst a moderate escape of clotted blood, a shred of membrane which proved to be decidua. The examination showed the uterus soft, somewhat patulous, bent to the right side, about twice its normal size; and placed quite close to it, in the lower and anterior part of the pelvis, an ovoid tumour, very painful, and about the size of a man's fist. In the next few days decidual elements were distinctly visible in the copious red and flaky discharge. In the end of September another fainting attack took place without any special



cause, accompanied by the appearance of a moderate peritonitis with remittent fever, striking weakness, pallor, and a weak, rapid pulse. The tumour could now no longer be defined on account of the swelling of the neighbouring parts. The pouch of Douglas was filled with a doughy mass, which pushed the uterus forwards and to the right side. Evidently a rupture of the ovum sac, which was formed in the left tube, had taken place. In the mammæ there had already been found at the beginning of the illness pretty copious colostrum. After a week the bad symptoms gradually disappeared, the exudation in the pelvis became reabsorbed, and the tumour projected forwards quite distinctly as a hard, uneven, long, spindle-shaped body, which in the next two months shrivelled up like a cord and showed itself always more clearly as the Fallopian tube. The woman made a complete recovery. She has, since this occurred, had three normal labours, and was, when last I heard of her, quite healthy.

CASE IV.—Mrs R., 28 years old; menses appeared at 14, and since then has been regular; married at 19, and has four times. (the last occasion  $1\frac{1}{4}$  years ago) had natural deliveries; nursed the children. She had, six weeks after the last birth, a bloody lochia, but only remained seven days in bed. On the 26th February 1877 the woman came for treatment, complaining of being very feverish, in a weak condition, and suffering from severe abdominal pains. She stated that she ceased to menstruate in November 1876, and the symptoms familiar to her of pregnancy appeared. These were, however, unusually severe, and she had day and night tormenting colicky pains in the abdomen, marked swelling of the belly, frequent diarrhœa, with now and again slimy and bloody evacuations, but always accompanied by a strong inclination to go to stool. Occasionally with these loose evacuations hard knotted masses were passed. After this condition had lasted for two months she suddenly fainted during a severe effort at stool, and since then she has been continuously bedfast, suffering from severe abdominal pains, increasing diarrhœa, frequent feverish attacks, and night sweats. Her doctor had found a hæmatocele behind the womb. We found the woman very much wasted, skin dirty yellow in colour, muscles somewhat flabby, depressed in body and spirits, mucous membranes pale, thickly furred tongue, little colostrum in the mammæ, in the lungs very shallow breathing, with little expansion at both bases posteriorly, heart sounds indistinct, aortic second a little accentuated, spleen and liver moderately enlarged, abdomen swollen and tympanitic, the transverse colon and iliac flexure being particularly prominent. Free fluid in the abdomen could not be demonstrated with certainty. Out of the pelvis on the left side rose a flat, roundish swelling, which stretched from three fingers' breadth above Poupart's ligament (left) to opposite the middle line, and was not sharply definable. One recognised that

this swelling belonged to a retro-uterine tumour, which almost filled up the pelvis, and which had pushed the uterus upwards, forwards, and to the right. One could feel through the vaginal roof all throughout this tumour tough, firm masses alternating with parts softer and more elastic. The bladder was firmly pressed against the anterior wall of the pelvis: its right corner and fundus reached far above their normal limit. The tumour pressed backwards in a marked degree the anterior rectal wall. No lesion of the rectal mucous membrane could be discovered, but it appeared tightly stretched over the uneven tumour, which was traversed by many furrows and ridges. The urine was slightly albuminous, unusually dark in colour, almost brown. The evacuations of the bowels were variable, mostly showing the characters of catarrh of the large intestine; here and there old hard scybala. She suffered from remitting fever,  $38^{\circ}5-39^{\circ}8$  c.; pulse small, 120-130; and occasional rigors. Her chief complaints were weakness, loss of appetite, thirst, sleeplessness, and abdominal pains. We diagnosed an abdominal pregnancy of beyond the third month, with hæmorrhage into the gestation sac, and attachment of the placenta to the posterior wall of the pouch of Douglas, apparently at the upper part of the rectum, and perhaps also the lower part of the sigmoid flexure. The lingering pelvic peritonitis and the hectic fever we attributed to the putrid transformation of the contents of the sac. We concluded, after the foregoing examination on 1st March (which had very much distressed the patient), to open the tumour from the posterior fornix the following morning and empty it. During the night before the 2nd March the patient awoke at 11 o'clock with severe bearing-down pains, and expelled from her vagina a putrid mass, which was quickly removed from her neighbourhood, and regarding which further particulars could not be got.

We found her next morning very much exhausted. In the posterior fornix was an irregular opening, with thin, friable, easily torn edges, from which a dark, strong-smelling fluid was escaping, mixed with dark blood-clots and clear shreds of tissue. We reached through this opening a roomy cavity, out of which we removed blood-clots, fibrous masses, tough shreds of tissue, partly loose and partly adherent below and posteriorly to the adjoining rectal wall, and in which placental tissue (chorion tufts) was seen to be present. Parts of the foetus were not found. Under anti-septic washing out similar masses were discharged, in always diminishing quantity, from the sac, which collapsed, and the fistulous opening in the fornix closed in three weeks' time. The fever completely left her, but did not quite disappear until a week after the closure of the fistula. From this moment the woman slowly recovered. After five weeks more the uterus was found retroverted and fixed to the posterior pelvic wall, and specially to the rectum.

CASE V.—Mrs B., 37 years old, had a normal labour seventeen



years ago ; only remained four days in bed during her puerperium ; did not nurse the child. She has been married four years. In November 1879 her menses, which before this had been regular, occurred in the usual manner. In the end of November there appeared great general malaise, with severe colicky pains. Swelling and trouble with the bowels, obstinate vomiting and obstruction, with tenesmus. In December the intestinal trouble increased to a great extent. The woman remained night and day in a bent-up position, her hands laid on her belly during the severe abdominal pains. Frequent attacks of diarrhoea with severe tenesmus now set in ; the evacuations, of a dysenteric character, containing here and there hard scybala.

Her sleep was much disturbed, and the woman was rapidly losing strength and flesh. In the end of December a thin bloody discharge set in from the vagina, which continued, with short intervals, until March 1880, when the patient came under our observation. This discharge was sometimes dark red, sometimes brown, and had often been mixed with small pieces of membrane. Since the end of December painful ischuria has been added to her troubles. Since February 1880 has had a severe cough, with sticky, purulent sputum, and pains over the right breast. On March 19th the following condition was found :—The patient was much emaciated ; the skin shrivelled and yellow in colour ; her expression anxious ; respiration very shallow, laboured, rapid, and interrupted by frequent coughings, which shook the abdomen painfully. Slight cedema on both lower limbs, a little more marked on the left side ; quick, small pulse, 120 ; temperature, which during a rigor the previous evening was  $40^{\circ}5$ , in the morning  $38^{\circ}2$ . The tongue inclined to dryness ; aphthous patches here and there on the buccal mucous membrane ; bad smell in the breath. Out of both flabby breasts pretty copious colostrum could be squeezed. The abdominal wall was pushed forward by the markedly distended transverse colon, and the liver was tilted upwards. The lung percussion note reached on the right side to the fifth rib, and was a little tympanitic at its lower part ; on the left side the lung percussion reached in the axillary line to the sixth rib ; the heart was placed more horizontally, its beat feeble, its size not increased, the sounds blowing, the second pulmonary a little accentuated. On the right side of the thorax posteriorly, dulness as far as the lower angle of the scapula ; here pleuritic friction, diminished vocal resonance ; in front and right side below crepitation ; left and posteriorly coarse crepitation ; spleen a little pushed backwards, apparently about three intercostal spaces long. Abdomen markedly and unevenly distended, tender to touch. In the lumbar and lateral region up to axillary line, fluid exudation could be demonstrated. The umbilicus was pushed to the front and right, and the left side of the abdomen was remarkably prominent. By palpation we were able to discover a tumour, which rose from the left pubic bone to



two finger-breadths above the umbilicus, about the breadth of a man's hand, and surrounded by *markedly distended intestinal coils*. These gave a deep percussion-note; the tumour on its upper more prominent part slightly tympanitic, in its lower part dull; change of position of the patient altered these relations, the clear percussion note moving downwards with the elevation of the pelvis.

Internal examination showed the bladder displaced upwards and to the right above the symphysis; the uterus about thrice its proper size, pushed to the front and right side, and much elevated; the fissured orifice externum hardly allowed passage of the point of the finger; the posterior lip of the cervix stretched by a tumour bulging forwards the posterior fornix, which was found to be the lower extremity of the mass already recognised in the abdomen, and which gave bimanually the impression of some slight fluctuation. From the uterus there flowed a badly-smelling, greenish, purulent discharge, mixed with small shreds of tissue, which contained pus cells along with decidual elements. The urine was brownish, slightly albuminous, containing a pretty fair amount of indican, and deposited a thick mucous sediment. It contained many pus cells, and was markedly acid; tube-casts were not present. Per rectum the tumour could be followed further upwards, and firmer and softer portions felt in it. After examination, foul-smelling fluid faecal matter mixed with mucus and blood flowed from the rectum. By puncturing the tumour with a trocar through the vagina, putrid fluid was obtained. This, according to the examination of Professor Recklinghausen, showed, with the exception of the constituents of old blood extravasation, no distinct tissue elements. The diagnosis was an abdominal gestation with dead ovum, filled with blood, and undergoing decomposition. There had developed from this, septic infection with peritonitis, right-sided pleurisy, and probably also septic affection of the lungs. The situation of the placenta was probably partly on the large intestine. As the only hope, and that but slight, of saving the life of the patient lay in the removal of the ovum, we proceeded on the following day to operate. The abdominal incision was limited by the intestines which lay round the tumour, and by the high position of the bladder. It was carried from outside the left rectus muscle downwards through the umbilical region to Poupart's ligament. The epigastric artery was tied before the incision was completed. We came upon a sac with a greenish-yellow wall, which was adherent to the peritoneum at its upper and left part for a distance of about 6 centimetres, the adhesion being easily separated. The sac contained air. From the left side and downwards flowed a peritonitic yellowish flocculent exudation. The transverse colon was firmly adherent to the right upper part of the sac; close to the whole of the right side of the sac lay strongly distended intestinal coils, and to the left side a part of the sigmoid flexure. From

the sac, when longitudinally opened, there was emitted a badly-smelling gas and a bloody serous fluid mixed with dark particles of tissue. The foetus lay transversely, bent sideways, adherent with the whole right side of its body, from head to foot, to the upper wall of the gestation sac. It showed itself to be, when freed, 12 centimetres long, withered, macerated, and the skin on the non-adherent parts cedematous, in parts emphysematous and raised in blebs. The umbilical cord was torn. From the foetus hung a piece about 1 centimetre long, the remaining portion leading to a thick piece of tissue which lay close to the lower left part of the sac. This, on closer observation, formed itself the wall of the sac, and came into immediate relation with the maternal tissues, amongst others, the iliac flexure. In clearing out of the sac the masses of blood-clot and reddish-yellow membrane, at parts very firm, especially from the bottom of the pouch of Douglas, one loosened a portion of the sac wall about the size of the hand. The placenta, very thick and flat, was remarkably easily loosened from its attachment. It adhered to a space about the size of a small plate on the iliac flexure and on a great part of the posterior wall of the pouch of Douglas. To its upper border the great omentum was in close relation, which passed into the sac from the left and above as a thick cord. After the gestation sac with its contents was removed as thoroughly as possible, the abdominal cavity was carefully cleansed from any exudation and shreds of tissue, washed out with thymol lotion, and drained. A large soft drainage-tube reached from the abdominal wound to an opening in the deepest part of Douglas's pouch, and thence outside through the vagina two smaller drainage-tubes lay in the lateral part of the pelvis; another such between the uterus and the bladder. Finally, one of Hegar's glass drainage-tubes was introduced as collecting-tube between those already described. Marked improvement in the general condition followed in the first few days; but afterwards there was gradually advancing peritonitis; right pleurisy, with infiltration of various parts of the lung; putrefaction of the gestation sac and margins of the abdominal wound, followed by death on the evening of 29th March.

The post-mortem examination by Professor Recklinghausen gave the following condition:—The heart-muscle very pale, valves normal. In the right pleural sac, half a litre of yellow thick exudation; fibrinous deposit on both pleural membranes, most marked in the lower parts. In the right lower lobe, after stripping off the false membrane, there are exposed small thick hepatized portions in the somewhat unexpanded tissue, less marked in the left lower lobe. In the arteries leading to the diseased parts, hard embola adherent to the vessel wall are found. The edges of the abdominal wound are in a necrotic condition; purulent fluid is found in the peritoneal cavity, and fibrinous deposit on the intestines, which are at parts glued together; the parietal peritoneum of the abdomen and pelvis,



also the serous membrane of the iliac flexure and great omentum, are slate-coloured, and at parts can be easily stripped off. After stripping off the fibrinous deposit, the sigmoid flexure and a part of the omentum appear darkly pigmented, and covered with a false membrane. In the large intestine, and especially in the sigmoid flexure, in the parts corresponding to the portion of the serosa referred to above, there was great swelling of the mucous membrane, with white discoloration of the folds and swelling up of the follicles (from the mentioned parts of the iliac flexure and omentum a part of the placenta was torn off during the operation). The pouch of Douglas is covered with a necrosed membrane, which resembles the membrane of an abortion. This can be followed over the posterior layer of the broad ligaments: to the left broad ligament it is firmly adherent. To the posterior and left part of the pouch of Douglas are attached black, firm, shaggy masses. Both tubes, the left with difficulty recognisable, are glued to the surrounding parts; the right ovary is easily recognised, the left being not easily found in the black necrosed masses. In the small intestine nothing abnormal. The kidneys show a somewhat thick cortex. The flaccid, pale spleen, 16 cent. long,  $7\frac{1}{2}$  broad, 3 thick, is adherent to the diaphragm. The liver poor in blood, not enlarged. The left vena cruralis is completely blocked by a thrombus loosely attached to its wall. In the left saphena vein is a fresher thrombus, which, on account of its attachment to the wall, is not to be considered post-mortem. In the vena cava, masses of very slight adherently clot are found diffused along its walls.

*(To be continued).*

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## VIII.—THE DIAGNOSTIC AND PROGNOSTIC VALUE OF THE INITIAL RASHES OF SMALLPOX.

By ROGER M'NEILL, M.D., Colonsay.

UNTIL a comparatively recent period little attention was paid to the initial rashes of smallpox. Most authorities attribute this to the fact that these rashes occur with varying frequency in different epidemics. I am, however, not aware of the existence of any statistics which establish this view. Trousseau, I believe, started the idea, and Simon, Curschman, Osler, and others repeat his statement. If the history and characters of these rashes are studied, it may be seen that they are rarely met with in unvaccinated cases; that they are most marked at a time of the disease when a physician is seldom consulted; that they soon disappear, or that their distinctive characters are soon masked by the development of the smallpox eruption; that they frequently occupy regions which are rarely examined during the premonitory



stage of smallpox; and that the patient is frequently not aware of their presence on his body, owing to the little or no inconvenience caused by them. These facts are sufficient to explain the reason why medical men paid comparatively little attention to these rashes. If the literature relating to smallpox and its symptoms is examined, it will be seen that the initial rashes have been found in varying proportion of the number affected whenever they were looked for. Few, however, took the trouble of studying their characters minutely. They have, therefore, been frequently mistaken for the co-existence of measles and scarlet fever with smallpox.

In studying the literature of this sign of smallpox, there is difficulty in knowing whether the author means, in some cases, the efflorescence which precedes, but afterwards develops into the papules, or what has been at a later period described as the initial rash, a thing which has an existence independent of the eruption of smallpox. Before describing these rashes as I have seen them during some months in the smallpox hospitals at Deptford and Homerton, London, I give the following brief extracts from English authorities on the subject. These, however, only serve as proofs of the small value that was until recently attached to them, and also the almost entire absence of mention of these rashes by English writers.

Sydenham<sup>1</sup>, in his account of the regular epidemic of 1667-68 and part of 69, states in his description of the discrete and confluent varieties, "*Variolæ dictæ nunc erysepaletis ritu, nunc morbillorum erumpunt.*"

Dr Walker<sup>2</sup> states that in every bad kind of smallpox the eruption is ushered in by a scarlet rash.

Thomas<sup>3</sup> states that the first appearance of the smallpox eruption is frequently preceded or attended by a rosy efflorescence similar to what takes place in measles.

According to Bateman,<sup>4</sup> the roseola variolosa occurs previous to the eruption both of the natural and the inoculated smallpox.

Dr R. Willan remarks that it is a universal efflorescence of a dark red colour, with violent fever, that indicate a confluent eruption and a fatal disease.

Watson<sup>5</sup> refers to certain rashes, like those of scarlet fever, measles, or erysipelas, as preceding the characteristic eruption in the confluent variety.

Aitken<sup>6</sup> states that the confluent variety is often preceded by an extensive erythematous or erysipelatous inflammation.

<sup>1</sup> *Opera Omnia*, Syd. Soc., 1846, p. 123.

<sup>2</sup> *Enquiry into Smallpox, Medical and Political*, 1790, chap. 8.

<sup>3</sup> *Pract. of Phy.*, 1821, p. 239.

<sup>4</sup> *Synop. of Skin Dis.*, p. 146, 1827.

<sup>5</sup> *Pract. of Physic*, 4th ed., p. 859.

<sup>6</sup> *Pract. of Physic*, 6th ed., vol. i. p. 403.

According to Flint<sup>1</sup> of Philadelphia, a diffuse redness of the surface, which is liable to be confounded with measles, precedes the appearance of the papules in the confluent variola.

Niemeyer<sup>2</sup> thinks that the scarlatinous redness which precedes smallpox is more characteristic of varioloid than variola.

Bristowe<sup>3</sup> states that petechial rashes are met with in cases which threaten to be severe.

Lieving<sup>4</sup> states that they are like the rash of scarlet fever; and Tilbury Fox<sup>5</sup> puts them under the head of erythema variolosa.

In the seventh edition of Tanner's *Practice of Med.*, 1875, p. 28, it is stated that in the hæmorrhagic smallpox, instead of the usual papular eruption, there is sometimes a general scarlet efflorescence, and in other cases a patchy rash resembling measles, minute petechial spots or large purpuric stains on the abdomen and thighs.

Even Marson, in his article on smallpox in Reynolds's *System of Medicine*, only states that in cases of smallpox after vaccination, a roseolous exanthem often precedes the eruption, which is liable to be mistaken for scarlet fever.

At a later period Osler<sup>6</sup> of Montreal published observations on eleven cases; and Dr Sharkey,<sup>7</sup> Assistant Physician to St Thomas's Hospital, published observations on twelve cases.

It is apparent from these short extracts that until lately English physicians neglected the study of the characters and varieties of the initial rashes of smallpox. The case was otherwise with Continental physicians. The characters of the different kinds of rashes have by them been minutely described, the sites occupied by them have in many cases been recorded, and their value as a diagnostic and prognostic sign has been carefully considered. The late Dr Theodore Simon of Hamburg<sup>8</sup> published observations on thirty-eight cases.

Hebra, in his *Skin Diseases*, and Curschman, in his article in Ziemssen's *Encyclopædia*, give some consideration to these rashes. According to Osler, Dr Knecht and Scheby-Buch published some observations. These I have not been able to examine. In France, Trousseau<sup>9</sup> described a few cases in his clinical lectures. Rayer<sup>10</sup> and other French physicians have made less important observations. Bateman<sup>11</sup> states that the roseolar efflorescence antecedent to the smallpox eruption was observed by the earliest writers on the disease, and that both by them and by subsequent writers they were deemed to be measles, which were said to become converted into smallpox. It is doubtful whether Bateman, in this statement,

<sup>1</sup> *Pract. of Med.*, 3rd ed., p. 893, 1868.

<sup>2</sup> *Pract. of Med.*, vol. ii. p. 554.

<sup>3</sup> *Pract. of Physic*, p. 165, 1876.

<sup>4</sup> *Hnbk. of Diag.*, p. 39, 1878.

<sup>5</sup> *Skin Diseases*, 3rd ed., 1873, p. 80.

<sup>6</sup> *Clinical Notes on Smallpox*.

<sup>7</sup> *St Thomas's Hospital Reports*, 1880.

<sup>8</sup> *Archiv für Dermatol. und Syph.*, 1870-71-72.

<sup>9</sup> *Syd. Soc. Trans.*, vol. i.

<sup>10</sup> *Traité Théorique et Pratique des Maladies de la Peau*, tom. i. p. 47.

<sup>11</sup> *Synop. of Skin Dis.*, 1827, p. 146.



meant the initial rashes or the blotches that develop into the papules of smallpox. Further on, however, the particulars of a case are given which was mistaken for the co-existence of diseases. From the description which is given of this case, it was undoubtedly a case of an erythematous initial rash. Dr Gallwey<sup>1</sup> published another case, which in all probability was a case of an initial rash, and not the co-existence of measles with smallpox, as Dr Gallwey supposed it to be. Another case, which was mistaken for scarlet fever co-existing with smallpox, was published by Dr Glehn.<sup>2</sup> Another case was recorded by the late Dr Murchison,<sup>3</sup> which he copied from the case-book of University College Hospital, and was treated by Dr Walshe. This case, as well as Illus. 5, which was probably treated by himself, are more likely to have been, not the co-existence of scarlet fever and smallpox, as he supposed, but the rash that frequently precedes and accompanies such cases as these undoubtedly were. Drs Theodore Simon of Hamburg and Osler of Montreal both agree in considering these cases the initial rashes of smallpox. After careful perusal of the original publications in the British Museum, I was compelled to come to the same conclusion. There is some satisfaction, when one differs from so high an authority as Dr Murchison, to know that although he published these cases as examples of the co-existence of diseases, he had some doubt about their nature.<sup>4</sup> Simon<sup>5</sup> and Osler<sup>6</sup> also agree about Murchison's ninth illustration of the co-existence of diseases being initial rash. Marson<sup>7</sup> also believed that this was a case of roseola preceding smallpox. So far as I know, there is no record of an undoubted case of initial rash in a patient so young as nine years, which was the age of this child. The state of the tongue, the anasarca, and cedema that supervened, and the fact that another girl in the same house was seized on the twelfth day with scarlet fever, all tend to make one regard the case as scarlet fever co-existing with smallpox, or at all events make its diagnosis as an initial rash doubtful.

During some months past I have seen many cases of smallpox in whom the ordinary eruption was preceded and accompanied for some time by an initial rash. Each case admitted into the hospitals had, however, to be certified as suffering from smallpox before admission. Consequently I have seen but few cases before the ordinary eruption was characteristic of the disease. As the initial rashes sometimes fade on the appearance of the papules, and as their characters are at other times destroyed by the development of the ordinary eruption, it is probable that some cases were admitted

<sup>1</sup> *Lancet*, 28th Aug. 1858.

<sup>2</sup> *British and Foreign Medical Review*, 1837, vol. iv. p. 219.

<sup>3</sup> *Medico-Chirurgical Review*, July 1859, p. 180, Illus. 3.

<sup>4</sup> *Med.-Chir. Rev.*, No. 47, p. 185. <sup>5</sup> *Archiv für Dermat. und Syph.*, 1871.

<sup>6</sup> *Notes on Smallpox.*

<sup>7</sup> *Med.-Chir. Rev.*, vol. xxx. p. 126.



from whom the initial rash had disappeared, and from whom I could get no definite history of its existence. Careful examination of the patients proved this to be a fact. I have frequently, on minute inspection, made out the remains of a faded rash while its true characters were destroyed. I have also seen cases from whom the rash had entirely disappeared, although the patients assured me of its existence before the development of the papules. In order to prevent the error of mistaking an erythematous rash for the blotches that develop into the papules, I have only regarded as having an initial rash cases in whom the smallpox eruption was scanty, and in whom, according to the statement of the patients, the initial rash was uniform in colour over the area covered by it. As I did not see the cases during the premonitory stage, I have not had the opportunity of watching the development of the rashes during the early period of their existence. The period of the first appearance of these rashes is frequently not known even to the patient. This is particularly the case with the petechial rash, owing to its elective site, and the want of any inconvenience being caused by it. I have examined each patient particularly on this point, because of its value from a diagnostic point of view, but frequently the rash was not noticed before the height of its development, and in some cases the patient was not aware of its existence until I pointed it out.

My object in studying these rashes was with the view of finding out their diagnostic and prognostic value. For that purpose I asked questions of the patients and the friends who came with them, as to the period of the first appearance, and the relation of that period to the commencement of the premonitory symptoms and to the outbreak of the ordinary eruption of smallpox. I also studied the characters of these rashes at different stages of their existence, and the simultaneous development of the smallpox eruption, and the state of the case generally. The age, sex, and state of vaccination, as well as the ultimate result, were noted.

Authors have classified the initial rashes of smallpox in various ways according to their characters. Trousseau<sup>1</sup> divided them into morbilliform and hæmorrhagic scarlatiniform; Simon<sup>2</sup> and Osler<sup>3</sup> into macular and diffuse; Curschman<sup>4</sup> and Sharkey<sup>5</sup> into the hæmorrhagic and the erythematous. I will follow Curschman's classification, but I shall include in the hæmorrhagic the pure petechial rash as well as the petechio-erythematous. In the latter I include cases in whom the petechial rash was on an erythematous base, and cases in whom the petechial rash existed on one part of the body and erythematous rash on another, and others in whom the rash had a deep red colour with a purplish tinge, was quite diffuse, partially disappeared on pressure, and in whom petechiæ

<sup>1</sup> *Clin. Lect.*

<sup>2</sup> *Archiv für Derm. und Syph.*, 1871.

<sup>3</sup> *Notes on Smallpox.*

<sup>4</sup> *Ziemssen's Encyclop.*, art. "Smallpox."

<sup>5</sup> *St Thomas's Hospital Reports*, 1880.

developed and were seen after the redness faded. I classify under the erythematous rash cases which Hebra, Tilbury Fox, and others would describe under the name of roseola variolosa or erythema variolosa, as well as cases which are similar to what has been described as scarlatinous and scarlatiniform, and also some which Trousseau would call morbilliform.<sup>1</sup>

According to Osler,<sup>2</sup> Scheby-Buch believes that in most instances the petechial rashes have an erythematous base; and in Osler's own cases five out of eleven showed petechiæ on an erythematous base. My cases tend to prove that the pure petechial rashes are the most common, and that the petechial rash on an erythematous base is less common than the pure erythematous. From Sharkey's description of his twelve cases it would appear that this was also the case,—six were pure petechial, four were erythematous, and two had petechiæ on an erythematous base. This seeming difference in the proportional number of the different kinds of initial rash may to a certain extent be dependent upon the time at which the observer had the opportunity of first seeing the case. In the combined rashes the erythema disappears at an earlier date than the petechiæ, so that it might be mistaken for a pure petechial rash.

*The Hæmorrhagic Rashes.*—These include the petechial and petchio-erythematous. Sir William Jenner<sup>3</sup> defines a petechia as a dusky crimson or purple spot with defined edges, unaffected by pressure, and not elevated above the skin. Willan<sup>4</sup> states that when sanguineous spots of purpura are minute, they are called petechiæ. Murchison<sup>5</sup> describes petechiæ as minute purplish spots or subcutaneous ecchymoses, which do not disappear on pressure. The individual spots in the petechial and petchio-erythematous rashes are in all probability minute subcutaneous hæmorrhages. In the height of their development they are of a dark red-brown colour with a purplish tinge. They are persistent on pressure. They are not raised above the level of the skin, but their edges are not well defined. The hæmorrhagic rashes vary in appearance according to the stage of their development or decay, the number of spots composing them, and the presence or absence of erythema.

The period of the premonitory stage at which these rashes appear is variable. This point is difficult to determine, as the patient frequently does not notice the rash until it is fading. In Sharkey's third case the rash appeared on the afternoon of the day on which the patient was admitted into the hospital. This was the third day of illness. One smallpox papule appeared on the shoulder the same evening. In his twelfth case the rash was stated

<sup>1</sup> Hebra, "Skin Dis.," vol. i. p. 56, *Syd. Soc. Trans.* Trousseau, "Clin Lect.," vol. ii. p. 81 et seq., *Syd. Soc. Trans.* Tilbury Fox, *Skin Dis.*, 3rd ed., p. 80. Niemeyer, *Pract. of Med.*, vol. ii. p. 554.

<sup>2</sup> *Clin. Notes.*

<sup>3</sup> *Med. Times and Gaz.*, 1850, vol. xx. p. 419.

<sup>4</sup> *Skin Dis.*, 3rd ed., p. 337.

<sup>5</sup> *Cont. Fevers*, p. 132.



to have appeared on the third day of illness, and the smallpox eruption on the fourth. In his tenth and eleventh cases the rash made its appearance on the second day of illness, and the smallpox eruption on the third and fourth respectively.<sup>1</sup> In Simon's seventh, eighth, and ninth cases the initial rash is stated to have appeared three days before the smallpox eruption, and in his tenth case two days before the eruption, and three days after the first premonitory symptoms. In his thirty-second case the initial rash appeared on the abdomen three days before the smallpox eruption was developed on any part of his body, and before he complained of anything except a little headache. In his thirty-third case the patient got ill three days before the initial rash appeared on the abdomen, and five days before the smallpox eruption was first noticed.<sup>2</sup> Of ten cases that Dr Gayton, of Homerton Smallpox Hospital, kindly allowed me to copy from his case-books, nine were petechial. In three cases the initial rash appeared one day before the smallpox eruption, and in one case it was noticed two days previous to the smallpox eruption. Dr McCombie of Deptford kindly gave me the particulars of six cases of this nature. In two cases the rash was noticed the day after the illness began, the smallpox eruption making its appearance one day after the first appearance of the initial rash in one case, and two days after its appearance in the other case. In another case the initial rash was noticed on the third day from the commencement of the illness, the smallpox eruption making its appearance on the following day. In my own cases the initial rash was noticed on the first day of the illness in two cases, on the second in three cases, on the third in five cases, on the fourth in one case, and on the fifth in one case. The initial rash was noticed before the smallpox eruption part of one day in two cases, about one day in five cases, and about two days in four cases.

It will be seen from the above that the hæmorrhagic rashes, without any doubt whatever, precede all appearance of the ordinary smallpox eruption, in a large number of cases, by some hours to three days; and in some cases, as in Simon's case 32, and in two of my own cases, the initial rash may be among the first changes noticed in the premonitory stage.

The characteristics of these rashes on their first appearance are not familiar to me, because, in most of the cases which I was able to observe, the rash was fully developed before it came under my notice. Sharkey<sup>3</sup> states, in his third case, that on the afternoon of the 8th of June he observed at the groins a slight sprinkling of punctiform bluish petechiæ. On the following day he states that the petechial eruption on the lower abdomen had become much more profuse. Simon<sup>4</sup> states that the diffuse rash may begin as isolated spots, which run together and become darker, or, accord-

<sup>1</sup> *St Thos. Hosp. Rep.*, 1880.

<sup>2</sup> *Archiv für Dermatol. und Syph.*

<sup>3</sup> *St Thos. Hosp. Rep.*

<sup>4</sup> *Arch. f. Derm. und Syph.*, 1871, part i. p. 374.



ing to the patient's description, be of a uniform redness from the commencement. According to the report of my informants, in my own cases the initial rash was first seen in dark red spots, and it extended over a wider area and grew darker in colour as time went on. Although the hæmorrhagic rash was fully developed in the groin in almost all my cases before admission, I have seen it beginning in the axillæ as detached dark red spots about the size of a small pin's head, and gradually getting more numerous, so as ultimately to become confluent. I have also seen petechiæ developing on a diffuse uniform redness. The manner in which the rash disappears would suggest the mode of its development, as a large number of the spots lose colour and disappear at irregular periods, leaving detached darker spots, which probably were later in appearing.

The time that the hæmorrhagic rashes take in reaching the height of development—that is, in covering the widest area and attaining their deepest colour—is generally from one to three days, but, as will be afterwards seen, they disappear very slowly.

(To be continued.)

## IX.—STATISTICS OF OPERATIONS IN MR JOSEPH BELL'S WARDS FROM 1ST MAY TO 31ST JULY 1883.

Reported by H. J. EDWARDS, L.R.C.P. & S. Ed., House Surgeon.

SIXTY-SEVEN operations were performed in the time with the following results:—

| <i>Amputations.</i>              |   |   |   |   |   | No. | Recovered. | Died. |
|----------------------------------|---|---|---|---|---|-----|------------|-------|
| Thigh                            | . | . | . | . | . | 4   | 3          | 1     |
| Leg                              | . | . | . | . | . | 1   | 1          | 0     |
| Foot (Syme)                      | . | . | . | . | . | 2   | 2          | 0     |
| Foot (Mackenzie)                 | . | . | . | . | . | 1   | 1          | 0     |
| Arm                              | . | . | . | . | . | 2   | 2          | 0     |
| Fingers                          | . | . | . | . | . | 5   | 5          | 0     |
| Thumb                            | . | . | . | . | . | 1   | 1          | 0     |
| <i>Excisions.</i>                |   |   |   |   |   |     |            |       |
| Elbow-Joint                      | . | . | . | . | . | 2   | 2          | 0     |
| <i>Bones.</i>                    |   |   |   |   |   |     |            |       |
| Necrosis                         | . | . | . | . | . | 3   | 3          | 0     |
| Cario-necrosis                   | . | . | . | . | . | 1   | 1          | 0     |
| <i>Tumours.</i>                  |   |   |   |   |   |     |            |       |
| Scirrhus of Mamma                | . | . | . | . | . | 6   | 5          | 1     |
| Fibroid of Mamma                 | . | . | . | . | . | 1   | 1          | 0     |
| Epithelioma of Orbit and Eyelids | . | . | . | . | . | 1   | 1          | 0     |
| "    Eyelid                      | . | . | . | . | . | 1   | 1          | 0     |
| "    Pinna of Ear                | . | . | . | . | . | 1   | 1          | 0     |
| "    Face                        | . | . | . | . | . | 1   | 1          | 0     |

*Tumours continued.*

|                                       | No. | Recovered. | Died. |
|---------------------------------------|-----|------------|-------|
| Epithelioma of Lip . . . . .          | 1   | 1          | 0     |
| "    Thumb . . . . .                  | 1   | 1          | 0     |
| Sebaceous of Scalp . . . . .          | 3   | 3          | 0     |
| "    Neck . . . . .                   | 1   | 1          | 0     |
| "    Shoulder . . . . .               | 1   | 1          | 0     |
| "    Face . . . . .                   | 1   | 1          | 0     |
| Fibro-cystic of Labium . . . . .      | 1   | 1          | 0     |
| Glandular of Neck . . . . .           | 1   | 1          | 0     |
| Multilocular Cystic of Neck . . . . . | 1   | 1          | 0     |
| Exostosis and Toe-Nails . . . . .     | 3   | 3          | 0     |

*Tendons.*

|                       |   |   |   |
|-----------------------|---|---|---|
| Tenotomy . . . . .    | 3 | 3 | 0 |
| "    double . . . . . | 1 | 1 | 0 |

*Head and Face.*

|                    |   |   |   |
|--------------------|---|---|---|
| Ptoxis . . . . .   | 1 | 1 | 0 |
| Hare-Lip . . . . . | 2 | 2 | 0 |

*Genito-Urinary Organs.*

|                               |   |   |   |
|-------------------------------|---|---|---|
| Amputation of Penis . . . . . | 1 | 1 | 0 |
| Circumcision . . . . .        | 3 | 3 | 0 |
| Hæmatocele . . . . .          | 1 | 1 | 0 |
| Hydrocele . . . . .           | 3 | 3 | 0 |

*Rectum.*

|                                 |   |   |   |
|---------------------------------|---|---|---|
| Fissure of Anus . . . . .       | 1 | 1 | 0 |
| Fistula in Ano . . . . .        | 1 | 1 | 0 |
| Recto-Vaginal Fistula . . . . . | 1 | 1 | 0 |

*Trepanning.*

|                              |   |   |   |
|------------------------------|---|---|---|
| Elevation of Skull . . . . . | 1 | 1 | 0 |
| Trephining . . . . .         | 1 | 0 | 1 |

*Summary.*

|                          |          |          |         |
|--------------------------|----------|----------|---------|
| Amputations . . . . .    | 16       | 15       | 1       |
| Excisions . . . . .      | 2        | 2        | 0       |
| Bones . . . . .          | 4        | 4        | 0       |
| Tumours . . . . .        | 25       | 24       | 1       |
| Tendons . . . . .        | 4        | 4        | 0       |
| Head and Face . . . . .  | 3        | 3        | 0       |
| Genito-Urinary . . . . . | 8        | 8        | 0       |
| Rectum . . . . .         | 3        | 3        | 0       |
| Trepanning . . . . .     | 2        | 1        | 1       |
|                          | <hr/> 67 | <hr/> 64 | <hr/> 3 |

From the above statistics it will be seen that out of 67 cases operated upon by Mr Bell during the three months ending 31st July, there have been 64 recoveries and 3 deaths, thus making the mortality somewhat under 5 per cent. Of the 3 fatal cases, 2 at any rate were nearly hopeless from the beginning, the patients being almost moribund at the time of operation. Death was inevitable, and would in all probability have occurred sooner had no operative measures been resorted to. The other death, too, can scarcely be said to have resulted directly from the operation.

The first fatal case recorded was after amputation of the thigh for railway injury. In this instance the patient was in an extreme state of shock and collapse when he was received into hospital. At the time of the accident, owing to the delay which occurred before surgical assistance could be procured, he lost a large quantity of blood. He was then brought in a considerable distance from the country, and on admission was almost pulseless. Mr Bell happened to be in the hospital, however, at the time the patient was admitted. The operation was therefore performed at once, and he was got off the table in safety, but died about thirty-six hours afterwards, never having rallied in the slightest from the shock of the injury.

The second fatal case was that of a woman in whom excision of the mamma had been performed for scirrhus. Here, again, death can scarcely be ascribed directly to the operation. The patient was beyond middle life, and had been very alcoholic in her habits for several years previously. Though not a desirable subject for operation on this account, Mr Bell consented to remove the tumour, as the patient was very anxious to have it done. For the first three days afterwards she seemed to do well. The wound looked healthy and appeared to be healing; but the temperature ranged between  $101^{\circ}$  and  $102^{\circ}$ . On the evening of the fourth day it ran up to  $102^{\circ}4$ , and the patient seemed to be sinking. She complained of pain in her heels, and on examining them there was found on each a dark gangrenous-looking patch about the size of a half-crown piece. In spite of treatment the temperature continued to rise and the state of collapse to increase, until on the evening of the sixth day after operation—*i.e.*, three days after the manifestation of the first unfavourable symptom—she died, the temperature being  $104^{\circ}4$  shortly before her death. On post-mortem examination the only thing to be noticed was a condition of general atheroma.

The other case which ended fatally was, like the first one, after primary operation, *viz.*, trephining for head injury. The patient, a man of middle age, was admitted into hospital with the history that he had fallen off a lorry. He was perfectly insensible from the first, the breathing being stertorous, the pulse slow, and the pupils much contracted. Later on there appeared to be partial paralysis on the right side of the body. There was no wound on the head, but an œdematous condition of the entire scalp was noticed, and on the left side, just behind the coronal suture, this condition was much exaggerated, so that the skin was distinctly swollen and boggy to the touch. Still no fracture of the skull could be made out, the symptoms apparently being due to compression of the brain by hæmorrhage. When Mr Bell saw the patient, fifteen hours after admission, he determined to give him the only chance of recovery by removing a portion of the skull, and so relieving the intra-cranial pressure. This was done over the swollen and



boggy portion of the scalp before referred to. On getting down to the bone a fissured fracture was discovered, but no depression found. A circular piece of the calvarium was removed, when extensive extravasation of blood was seen on the surface of the brain below the dura mater. Some clots were removed, and it was then noticed that the pulse improved somewhat. This improvement, however, was only transient, for although the wound was dressed so as to allow all discharge to get away, the patient died three hours after the operation. On post-mortem examination an extensive fissured fracture was found running backwards from a little in front of the coronal suture on the left side to the petrous portion of the temporal bone on the right, and a large amount of extravasated blood was compressing the frontal and temporo-sphenoidal lobes of the brain, and there was also extensive contusion and laceration of brain substance.

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## Part Second.

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### REVIEWS.

*Injuries of the Spine and Spinal Cord, without apparent mechanical lesion and Nervous Shock, in their Surgical and Medico-Legal Aspects.* By HERBERT PAGE, M.A., M.C. Cantab., F.R.C.S. Eng., Surgeon to St Mary's Hospital. London: J. & A. Churchill: 1883.

A LATE distinguished surgeon, whose wit had the sharpness and directness of his knife, used to recommend that to acquire a small competency easily, it was only necessary to get mixed up in a railway accident, not be much hurt, and then buy Erichsen on *Injuries of the Spine*. This work would not suit the modest ambition; and it might be advertised as a work suitable to be placed in the hands of the counsel for the defence in cases of actions against the railway company. It is a carefully written and rather clever criticism of much of Mr Erichsen's work; and were it not that in it is exhibited more than need be of the partisan spirit, we can find little fault with much of its statement.

Mr Skelton defends Queen Mary by denying the authenticity of the casket letters, or rather by suggesting that they are intentional forgeries. Mr Page is willing to save the pockets of the railway company by denying the existence of concussion of the spine, and suggesting that the so-called symptoms are purely imaginary.

After a discussion as to the rarity of pure concussion of the brain, apart from structural lesion, Mr Page gives anatomical and physio-

logical arguments to prove how well protected the spinal cord is, and how difficult it is to *concuss it*. MORS SILET is one of his strongest arguments against the existence of true lesion.

However, Mr Page allows the possibility of a patient being injured by a railway collision, and makes the following confession of faith: "The result of our own inquiries and experience leaves no doubt in our mind that where there is undoubted lesion of nerve centres or of nerve trunks, that lesion has been caused by localized injury at the part when the disease at first exists, and that general nervous shock is wholly inadequate to bring about so grave a result" (p. 120). He illustrates this by a well-marked case, where the poor sufferer showed he was not inventing or imagining his symptoms by dying of them, and which reads as a most typical example of what Mr Erichsen describes so well, and of what many of us have watched in the sick-room and described in the witness-box; but which also we have often been told from the railway side of the court was the result of imagination, hysteria in the male, or roguery.

Mr Page seems to doubt the possibility of subacute meningitis after injury so thoroughly, that he would put down cases showing such symptoms after a railway accident to pre-existent syphilis!!! and treat them accordingly (p. 125). This really adds a new danger to railway travelling,—to be told that if you do show symptoms after a knock on the back, that it proves you syphilitic.

The author's remarks are admirable on the great harm resulting to the patient's mental and bodily symptoms from the delay, anxiety, and worry caused by the preliminary correspondence about compensation, and the subsequent litigation. He touches very lightly on the even more terrible ordeal of the subsequent trial, in which skilled lawyers are paid to take to pieces every symptom, make light of every suffering, and go back on any error, misfortune, or disease of the plaintiff's previous life. He quotes Fanny Kemble as to the troubles of being a Chancery suitor. Her language might have been more severe had she been an innocent injured plaintiff in a railway case.

Want of occupation and bromide of potassium are classed as twin factors in the delay in the convalescence of such a patient; and with a cleverness worthy of a better cause, our author quotes largely from Sir James Paget's lecture on nervous mimicry of disease, as if its author meant his words to describe a railway case—truly a most audacious *petitio principii*.

We took up this book with high expectations, which have not been realized. Instead of a scientific treatise we find a bit of special pleading, sharp rather than subtle, and yet simple enough to show from whom the brief is held.

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*On the Treatment of Wounds and Fractures: Clinical Lectures.* By  
SAMPSON GAMGEE, F.R.S.E. J. & A. Churchill: 1883.

MR GAMGEE tells us that this work, being merely a series of clinical lectures, makes no attempt at the completeness and method of a treatise.

The arrangement of the lectures, and the cases recorded as illustrations, is consecutive and makes the book decidedly readable. Mr Gamgee's style of lecturing, as demonstrated by these lectures, is good, and evidently calculated to convey information to students in a manner both interesting and likely to be permanent. Each case is prefaced by a few remarks which introduce and lead up to the injury or special treatment; and, consequently, these remarks are followed by the record of cases which specially illustrate the subject brought under consideration.

The author's main object throughout the whole of these lectures is to prove that wounds and fractures are the same, and therefore require similar methods of treatment. The argument and deduction is mainly from the fracture to the wound. The rest, coaptation, etc., that are essential for fractures are the proper indications for wounds. He also dwells strongly upon the dressing of wounds by the dry method with which his name has long been connected. He uses mostly absorbent wool and styptic colloid. For fractures he advocates, as he has long done, immovable apparatus such as starch, plaster, etc.

The interest in the lectures is greatly increased by quotations from the writings of the great surgeons of past generations, such as Syme, Liston, Pott, Hunter, etc. Many of these quotations show that the practice and opinions of these men were nowise behind the present day in many particulars.

Though we cannot say that we agree with all Mr Gamgee says, we have no hesitation in recommending his lectures to our readers. They are very interesting, full of instructive cases, and replete with sound practical suggestions. The twelfth and last lecture on antiseptics will, we are sure, be read by all with interest, even by those who, being Listerians, will not agree with the author. The lecture is an able exposition and defence of simplicity in surgery.

In an appendix to the book there are many excellent practical directions given as to the application of surgical dressings and apparatus.

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*The Electro-Magnet and its Employment in Ophthalmic Surgery.*  
By SIMEON SNELL.

THE removal of small pieces of iron or steel from the interior of the eye by means of the electro-magnet, has now become a recog-



nised operation in ophthalmic surgery. The author of the little book before us has had exceptional advantages for thoroughly testing the efficiency of this method. He has not only published a number of his own cases, in which he has met with more or less success, but has taken the trouble to collect a large number of published and unpublished cases from the practice of other surgeons at home and abroad. From this it is evident that we possess in the electro-magnet, now constructed for this purpose, a means of saving many eyes which would otherwise sooner or later have to be enucleated. Although chips of iron and steel, if situated in the aqueous chamber or lens, can in many cases be removed with the ordinary instruments used for operations on the eye, their removal may be effected with much greater certainty, and generally with less disturbance to other parts, by means of the electro-magnet. If the capabilities of this instrument were limited to the successful treatment of those cases alone, we should feel that a great advance had been made in its introduction into surgery. But a no inconsiderable number of cases are now on record, and their number is no doubt being almost daily added to, in which similar particles have been successfully removed from the vitreous chamber without completely destroying vision,—sometimes, indeed, leaving a very large proportion of the original visual acuity, and in almost all cases necessarily leaving the eye in a more satisfactory state, as far as inflammatory destruction of a type dangerous to the safety of the other eye is concerned. When it is considered how almost universally unsuccessful attempts made with other instruments are in such cases, we cannot help coming to the conclusion that the results hitherto obtained with the magnet are not only encouraging, but impose upon those who are in the habit of meeting with accidents produced by the penetration of the magnetisable metals the duty of attempting their extraction, in all fresh cases at any rate, before adopting any other method of treatment. Experiments have been made with some success to diagnose the presence of and even localize the position of such foreign bodies in the eye. These are fully discussed in Mr Snell's work, which will in all respects repay a careful perusal.

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*Lectures on Cataract.* By GEORGE COWELL, F.R.C.S.

WE miss in these lectures any detailed discussion of the various methods of healing after cataract, according to the nature and consistency of the opaque membrane, as well as the treatment adopted by the author in different complications which may arise during or after the operation of extraction. The lectures contain no new matter, although sound so far as they go; they are certainly neither sufficiently exhaustive nor sufficiently critical to be of much practical value. The time is surely past when statistics of 100 suc-

cessive operations can be held to give sufficient weight to the advocacy of any slight modification from the ordinary methods of operation.

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*Illustrated Medicine and Surgery, April 1883.*

THIS number of the above journal is particularly interesting and well illustrated. Dr Dawson gives a report, with two excellent plates, of an enormous enchondroma of the humerus. Dr P. Hard gives a case of Trichophytosis barbæ, with a plate faithfully executed from a photograph. Dr Pooley reports a case of rupture of the choroid, with four illustrations. Dr Knight shows drawings of a case of syphilitic stenosis of the larynx. There are other interesting and valuable papers and illustrations. On the whole, the fasciculus is both interesting and valuable.

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*Twenty-Fourth Annual Report of the General Board of Commissioners in Lunacy for Scotland. Edinburgh: 1882.*

1882: *New Zealand. Reports on Lunatic Asylums of the Colony for 1881. Presented to both Houses of the General Assembly by command of His Excellency.*

THE number of the insane officially known to the Scottish Lunacy Board was, for the year 1881, 10,355. Of these 1638 were maintained from private sources; 8655 by parochial rates; and 62 at the expense of the State. The increase of pauper lunatics during the year was no less than 337, with a decrease of 4 private patients. In training-schools for imbeciles there was an increase of 6 paupers and a decrease of 3 private patients.

The commissioners intimate that, while presenting the statistics for the year, they do not give any detailed analysis, thinking it enough to do so every five years; and no doubt conclusions from statistics are much safer when drawn from lengthened periods.

What deeply interests the Scottish Board of Lunacy is the "open door system" in asylums, and the "boarding-out system." The first has attracted some attention in foreign countries. In a favourable notice of "Woodilee, a Model Lunatic Asylum," by Dr Seip, which appeared in the *Philadelphia Medical Times* (December 16, 1882), we are told that various visiting physicians from France, Germany, England, Ireland, and the United States, unite in the statement that Scotch lunacy differs materially from that found in their respective countries. The Scotch are soberer even in their frenzy, wiser even in their madness, "have more respect for authority, and hence are easier managed." Dr Seip does not



think this style of argument of any weight; and in this he will likely find many to agree with him.

We have looked at the statistical tables to see if the increased liberty given in some Scottish asylums be accompanied with any serious increase in the number of escapes and accidents. There seems to be a small increase in the number of escapes, for we cannot quite accept the remark at the foot of the return of escapes at p. xiii. of the Report:—"This statement shows that the number of escapes during 1881 has been about the average proportion for the last ten years." On examining the figures we find that the number of escapes in 1881 was 37 in the thousand, and the average of the ten preceding years was 34 in the thousand. The average of the three years from 1871 to 1873 was only 29, after which it rose. The number of accidents returned to the Board was 141. Of these 11 were fatal; 2 died from injuries inflicted by others; and 7 seem to have been returned as suicides, though the Board holds that in only one case does it appear to have been determined with certainty that the acts were committed with suicidal purposes. In the other six the death was more or less the result of the patients' own acts.

The reports of the deputy-commissioners are, as usual, of an interesting character. Dr Fraser commences by frankly stating his belief that it is desirable that as many patients as possible should be provided for out of asylums. He observes that the majority of improper removals from private dwellings to asylums is due "to the failure on the part of inspectors of poor to take the trouble required to find suitable guardians for the patients, and to the ease with which pauper patients may be placed in asylums."

"Let me," he writes, "however, sketch briefly what would be seen by a visit, say to Gartmore, where thirty patients are provided for. The patients in this village would be found enjoying the amenities of private homes, and the majority the freedom of rural life,—their physical condition good,—their complexions indicative of life in the fresh air and of a satisfactory dietary,—their clothing, cleanliness, and tidiness as satisfactory as those of their neighbours and as the nature of their work will permit,—the homes in which they live clean and orderly, having been well selected,—their guardians generally good Scotch housewives."

There is clearly one standard for lunatics boarded out and another for those in asylums. Instead of the anxious attention to outward appearance, and the pretentious display of furniture and decoration, which occasionally puts one in mind of a museum rather than of a home, one has to be content with the patients being as clean and tidy as their neighbours.

Dr Lawson, the other deputy-commissioner, thus states the case:—"I am quite prepared to admit that there is room for honest difference of opinion whether many or all of these 595 pauper lunatics might not enjoy many comforts in a well-managed and medically superintended institution which they do not enjoy in



their present dwellings. Most of them might be fed with greater precision, and perhaps more nutritiously; their surroundings would be more luxurious, and their habits of living more regular. They might be placed in the presence of many amusements designed to relieve the monotony which had been superadded to their already too monotonous lives. They might even be trained to employ themselves to a greater extent than if they had remained in private dwellings. But there can be no reasonable doubt that they would also sacrifice much by the change. What leads a pauper to prefer a miserable pittance in a private dwelling to the comparative luxury even of a poorhouse? It is the sense of liberty; the idea of having a home; the desire for voluntary isolation or for voluntary sociability." There is no question that Dr Lawson seizes on the essential point. He will not have his mind seduced by the spectacle of a large number of composite zoids efficiently organized, with a circulation of proper nutrient fluids, and bathed by enough of fresh water. Our efforts should be directed to afford the chronic insane the means of happiness, that unattained, our wisdom is more a fool than folly, "a melancholy fool without her bells."

At Woodilee Asylum Dr Rutherford has got a number of cottages built at suitable parts of the extensive farm around the asylum, with accommodation for quiet patients, managed by an attendant and his wife, each cottage having a vegetable garden attached large enough to give suitable employment. This "system of location" is preferred by the majority of Barony Parish Board, though a short while ago some of the managers were anxious to sell the costly asylum of Woodilee and board all the lunatics out in private houses!

There has been a tendency to favour a trial of lay superintendents in asylums for the insane. The law requires a resident physician where there are more than a hundred lunatics, and this has been met by having a young medical man at a low salary to reside in the asylum and to carry out the directions of the visiting physician. Between these two there is a non-medical superintendent whose precise functions are not known to us. In one of the commissioner's entries on the Paisley Burgh Asylum, containing 114 patients, we read:—"The recommendation in the last entry as to the preparation of rules defining the position and duties of the assistant medical officer has not yet received effect. It is again made, and it is suggested that the rules of the Greenock Parochial Asylum should be adopted, as far as the different circumstances of the two institutions will permit." This arrangement, therefore, holds good in two parochial asylums. We do not know on what considerations it has been adopted. To judge from the report published in the newspapers of a deputation from the City of Glasgow Parochial Board who lately visited the Paisley Burgh Asylum, the arrangement does not seem a complete success, and the trial of a non-resident medical officer to

the Larbert Institution has been followed by an increased mortality of the inmates. In 1882 it amounted to 3·8 per cent., whereas the mortality of the last clear year in which there was a resident medical man was 0·8 per cent., and the mean death-rate of ten years 1·5 per cent.

The report contains an elaborate argument against the continuance of the grant of 4s. a week to pauper lunatics from the imperial exchequer. It is shown that this ill-advised measure has led to a great increase in the number of such dependents upon the taxpayers, without in any way improving the condition of the insane.

In consequence of the death of the Inspector-General of Asylums, Dr Skae, and in the absence of his successor, the Colonial Secretary directed that a report should be made from the deputy-inspectors and superintendents of the lunatic asylums in the colony. Naturally these reports are of unequal merit—some ill-written, others tolerable compositions; some very short, others long; on the whole, contrasting unfavourably with Dr Skae's able, clear-sighted, and interesting reports.

The percentage of deaths on the average number resident was, for males, 6·29; for females, 3·60; for both, 5·55. In Scotland the mortality was, in 1881, in the royal and district asylums, for the males, 7·7; females, 7·4; total, 7·5. In the private asylums it was, males, 6·3; females, 5·5; total, 5·8. And in the parochial asylums—males, 9·2; females, 9·1. The percentage of recoveries on admissions was, in New Zealand, for males, 40; for females, 51; for both, 44. In Scotland it was, in royal and district asylums, for males, 36; females, 42; both, 39; in private asylums—males, 53; females, 50; both, 51; in parochial asylums—males, 35; females, 51; both, 43. These figures look well for New Zealand, but to get at their relative value it would, we suspect, be needful to compare the ages of the patients in the two countries.

There is a refreshing frankness about some of these colonial reports, and a redundancy of detail in one or other direction, which contrasts pleasantly with the vague and conventional language often employed in similar documents in the old country. Mr J. Mackay, deputy-inspector of the Wellington Asylum, seems to claim special notice for the very careful way he has done his inspecting work and the careless way in which he has read his proof-sheets. His visits "have been paid at irregular intervals, at various hours of the day and evening, and sometimes on three days consecutively." He thinks that the female patients should have flax beds instead of straw ones, which are "generally uncomfortable, and especially difficult to sleep on when newly filled, because of their convexity." Not only did he see that the patients got the use of billiard-tables, draughts, and books, but he watched to ascertain if they used them. The result is reassuring; he "has occasionally seen a game of billiards and draughts going on, and a few of the patients reading or pretending to read." The books



are not very entertaining, being chiefly school readers, and are not much used in the female wards. "In fact," he observes, "the female patients do next to nothing, with the exception of helping occasionally at meal-times. The matron informs me they will not work, and that really there is little for them to do." Mr Mackay is justly distrustful of this excuse of the matron's, since he has seen them working at another asylum.

The best and most carefully written of all the reports is by Mr W. E. Hacon, M.R.C.S. and L.R.C.P., the medical superintendent of the Christchurch Asylum. It contains the following passage:—"With the deepest respect and grief I wish to refer to the death of my late inspector, Dr Skae, whose well-known reputation and ability attracted me to remain in the colony and work under him. While he lived, his kindly, sound, and practical advice was of the utmost service to me, and on his last visit of inspection here he took the greatest interest in every particular, pointing out to me any defects which he noticed in my administration in a firm but conciliatory manner. His presence was a stimulus for 'better things' beyond the daily routine work—for higher aims and motives."

Another grateful tribute is given to Dr Skae's memory by Mr H. Gribben, the superintendent of Hokitika Asylum. It is clear that, though Dr Skae accomplished a good deal under great difficulties, much is still to be done ere the insane in New Zealand receive such treatment as might be expected in a British colony. The attention attracted by Dr Skae's death has probably had a good effect in arousing the Government to place proper sums upon the estimates, and to grant what was absolutely needed without unnecessary delay and circumlocution. More land is being granted, and better sites talked of for new asylums; and in several the dual arrangement of lay superintendent and visiting physician has been done away with, and the whole establishment placed under one responsible head.

We hope that under the charge of Dr Grabham, the newly appointed inspector of asylums, the improvement of the insane in this important colony will go on without difficulty or interruption.

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## Part Third.

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### MEETINGS OF SOCIETIES.

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#### OBSTETRICAL SOCIETY OF EDINBURGH.

##### SESSION XLII.—MEETING IX.

*Wednesday, 27th June 1883.*—Professor SIMPSON, *President, in the Chair.*

I. *Dr Peter Young* showed a MONSTER FÆTUS, weighing 12 lbs., and which, from its excessive size, required to be mutilated before



delivery could be effected. The mother, a primipara æt. 33, last saw the catamenia on the 9th September 1882; and as delivery took place on 22nd June 1883, the pregnancy lasted 286 days. The intra-uterine foetal movements were well marked up to the 14th June, after which date they were no longer observed. The labour pains began about 8 A.M. on 22nd June, and Dr Young saw her about 3 P.M. At this time the os was the size of a florin, the head presenting, but not so deep in the pelvis as is usual in primiparæ. The pains were of moderate strength, and recurring at intervals of about twenty minutes. As there was no immediate prospect of delivery Dr Young left her, and called again at 6 P.M. By this time the os was pretty fully dilated, the bag of membranes projecting into the vagina, and the pains regular and fairly strong. On bursting the membranes a considerable quantity of amniotic fluid, of a dirty greenish-brown colour, in which numerous white, curdy masses of vernix caseosa were floating, escaped. The head was found in the fourth position and flexed to a great degree, so that the occiput instead of the vertex presented. The pains now became more frequent and stronger, but, notwithstanding, the head made but little progress; and, after waiting an hour, the patient was anæsthetized, and the whole hand introduced into the vagina, when the bones of the foetal skull were found to be loose and movable, and the head itself to have the form of a pointed cone. The condition of the head, combined with the appearance of the liquor amnii, the absence of foetal movements and of heart sounds, made the diagnosis of the death of the child certain. The forceps were now applied, the head seized obliquely and brought down to the vulva without difficulty. As the head began to emerge great resistance was experienced, and it was after the exercise of a good deal of traction that the head developed. Notwithstanding that plenty of time was given and the head was soft and pliable, the perinæum was torn up to, but not into, the sphincter ani. It was interesting to note that the distorted anus was pressed close against the end of the coccyx by the enormous bulk of the head. It was, however, after the birth of the head that the real difficulties began. Although the pains were vigorous, and the head, grasped in the hand, pulled down with all the force available, the shoulders of the child remained at the brim of the pelvis and refused to enter the pelvic cavity. Under the strain exerted the neck of the child gradually elongated, and decapitation with scissors was about to be performed when the vertebræ at the root of the neck gave way. The pelvic cavity being now clear, a hand was introduced, and with some difficulty one of the arms was liberated and drawn down. Traction was then made on this, but the resistance was so great that the soft tissues of the shoulder began to tear, and eventually the acromio-clavicular articulation gave way, and the arm with scapula attached was torn off. The other arm was then brought down and traction made on it, and, by means of a crochet inserted into the ribs on the opposite

side, the body of the child was brought down and delivered. The perinæum was then stitched. The mother made an excellent recovery. It is of interest to note that the father of the child belonged to a family all of whom were of unusual size at birth.

II. *Dr Smart* read his paper on TWO CASES OF CONGENITAL MALFORMATION IN THE FEMALE.

*Dr Carmichael* thanked *Dr Smart* for his paper, and remarked on the hopelessness of operative treatment in these cases.

*Dr Angus Macdonald* had seen a case similar to the second one described by *Dr David Smart*, in which there was not enough tissue present to admit of a plastic operation.

III. *Professor Freund's* paper on EXTRA-UTERINE GESTATION was then read, which appears at page 243 of this Journal.

*Dr Carmichael* moved that a special vote of thanks be accorded to *Professor Freund* for his elaborate paper. He had always been struck with the low mortality in cases of extra-uterine pregnancy.

*Dr Angus Macdonald*, in seconding the vote of thanks to *Professor Freund* for his extremely valuable paper, suggested that the discussion of it be held over for a special meeting of the Society. They were indebted to *Dr David Smart* for the trouble taken in the translation of it. The paper was, however, of such compass, and touched upon so many important points, that it would require to be carefully read before it could be discussed to advantage.

After some discussion it was agreed to set apart a special night for the discussion of the paper next session, after it had appeared in the Journal and been circulated among the members.

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## Part Fourth.

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### PERISCOPE.

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#### MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

VIBURNUM PRUNIFOLIUM IN UTERINE AFFECTIONS.—*Dr F. C. Herr*, Philadelphia, in the *Therapeutic Gazette* for July 1883, strongly recommends this drug for the treatment of the various forms of dysmenorrhœa. He gives a teaspoonful of the fluid-extract every four hours, beginning one day before the expected menstruation, and continuing at longer intervals throughout its history. He relates a number of cases in which he had used this medicine, and apparently with decided benefit to his patients. He states also that he has found it of signal benefit in after-pains in subinvolution, in metrorrhœa, and in reflex nervous disturbances of the



uterine organ. He ascribes to the drug "a general uterine tonic action."

**VERATRUM VIRIDE IN TYPHOID FEVER.**—Dr A. W. Nelson publishes the results of his treatment of typhoid fever by small repeated doses of veratrum viride (*Archives of Medicine*, April 1883). He has administered this drug in every case of the disease occurring in his practice during the past decade, and has not lost a case. He states that under its influence the pulse and temperature are lowered and held within the limits of safety, the danger of intestinal hæmorrhage is reduced to a minimum, and convalescence is not unfrequently established at the end of the second week. The dose given was one or two drops of the official tincture every hour. —*The London Medical Record*, July 1883.

**KAIRIN,  $C_{10}H_{13}NO$ .** — An excellent series of clinical observations on the antifebrile action of kairin has been contributed to the *Berliner Klin. Woch.*, No. 31, by Paul Guttman. The number of experiments made upon forty-two patients was seventy-two. These included cases of pneumonia, measles, phthisis, typhoid fever, scarlatina, pleurisy, peritonitis, erysipelas, ague, and septicæmia. It is understood that the experiments were only made when the fever in the above diseases was present and likely to remain so. This principle was carried out as far as possible, and the drug was administered in the latter part of the morning and continued till the end of the afternoon. In the majority of cases the temperature ranged from  $39^{\circ}5$  to  $40^{\circ}5$  c. cent. when the experiment was commenced. It was shown that kairin, administered in hourly doses of one half to one gramme, was soon followed by a gradual fall in the temperature of the body, so that in from three to four and a half hours after commencement, in the majority of cases, a considerable reduction had taken place, and in several the register indicated a normal body heat. By repeated doses of a gramme of the kairin the normal temperature may always be gained; this is vouched for by Filehne and Guttman. In many patients a notable degree of perspiration was met with, especially in cases of phthisis. As the temperature falls the pulse becomes less frequent. No unpleasant symptoms were caused by the kairin, which was used freshly prepared; older specimens may give rise to cyanosis and collapse. The antipyretic action of kairin is not weakened through repeated use; each new dose is followed by the usual result. Kairin is incapable of shortening the disease or altering its phenomena. Greenish coloration of the urine appears about twelve hours after the administration of the drug, and lasts generally for about twenty-four hours. A contrast is made between the effects of quinine and those of kairin. The latter acts more rapidly, but is of shorter duration, the former is just the opposite. Kairin given in hourly doses of one gramme after the employment of three to four grammes has a more powerful and constant antifebrile effect



than quinine in doses of one and a half to two grammes.—*The Medical Times and Gazette*, 11th August 1883.

**KAIRIN.**—In the *Therapeutic Gazette* for July there is extracted from the *Berliner Klin. Wochen.* regarding kairin. The sulphate is a yellowish-brown powder, readily soluble in water, and has a salty and aromatic taste. At the Erlangen clinic experiments give the following results:—A dose of 0·3 grm. when given but once has no effect at all on the temperature; 0·5–1·0 grm. given once causes a decline in temperature amounting to  $\frac{1}{2}$ –2° C. This effect begins about 25 minutes after the administration, and continues, when the former dose is given, 2 $\frac{1}{4}$  hours; and when 1 grm. is given it lasts 3 hours. Immediately after the action has passed off the temperature again rises. If the second dose is given before the effect of the first has passed off, the decline is rapid; 0·5 grm. given every hour causes the temperature to run down to 37·0–36·5 after the fourth dose.

In pneumonia the patient feels very comfortable after the disappearance of the fever, but the temperature must be kept down, and this can be done by giving 0·75 grm. every two hours as long as the disease continues.

**BIARIUM CHLORIDE.**—In the *British Medical Journal* of 11th August, Professor Ringer and Dr Harrington, Gainsbury, relate a series of interesting experiments with the view of determining the physiological action of this drug. As the result of their experiments they sum up as follows:—

1. We have the experiments of Boehm, showing the systolic heart, the retarded pulse-rate, and the heightened blood-pressure, resulting from barium chloride action.

2. We find that the systolic heart and the retardation occur equally when the centres of reflex control are destroyed.

3. We find that the local application of the salt, in diluted solution, to the heart *in situ*, produces local spasms at the point of application; and also that the excised heart is arrested in full systole by the drug.

4. We find that the vessels freed from central nervous control respond to the direct action of the salt.

5. We find that we are unable to influence the calibre of the vessels through the nerves apart from direct local action.

We here see that the action on the heart is a guide to the action on the arterioles, or *vice versa*, and this we should be inclined to expect, since, on tissues resembling one another, we should look for a resemblance of effects.

**CHLORAL HYDRATE AS A PURGATIVE.**—B. Bonatti recommends chloral hydrate in combination with senna as a rapid and safe drastic cathartic. He prescribes—R. Infus. sennæ fl. ℥x.; chloral hydratis gr. xxiv. to l.; syrapi fl. ℥i. M. With this he obtained an

action where coloin and jalap had failed.—*D. Med. Zeitung. Pharmaceutische Centralhalle*, No. 52, 1882; *Pharmaceutical Gazette*, July 1883.

INJECTIONS OF ARSENIC IN GOITRE.—One part of Liq. Kal. Arsen. to three parts water was employed in 100 cases. Of this solution 10 to 15 minims are injected parenchymatously two to three times a week. This preparation is preferable to the analogous injections of iodine—(1.) The cures are as lasting; (2.) Reaction in the tumour is less; (3.) Subjective symptoms on the part of the patient are less.—E. Grunmach, *Berlin Klin. Wochenschr*, 1882; July *Therapeutic Gazette*.

### PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

EXAMPLES OF TWO CLASSES OF CASES IN WHICH CEREBRAL ABSCESS, MENINGITIS, OR PYÆMIA ORIGINATE IN DISEASE OF THE EAR.—Mr Dalby read before the Clinical Society of London, at their meeting on Friday, 11th May, notes of eight cases in which suppuration within the tympanum had ended fatally. They were selected to show how, by the consideration of a large number of cases, they might be divided into two very distinct classes. In the first class were those in which a person apparently in good health, with both tympanic membranes entire, was attacked by acute inflammation of the tympanic cavity, ending in rupture of the membrane and a discharge from the ear. Within a period to be counted by days, he or she had rigors, and in due course the usual symptoms and endings of meningitis, cerebral abscess or pyæmia. In the second class, before any serious complications arose, perforations had existed for many years, attended either continuously or at different times by purulent discharge; and these might again be subdivided into those in which the bone forming the tympanic cavity was diseased, and those in which it was not. The questions which were discussed in this paper were as follows:—(1.) Can it be predicted of any case, in an early stage of its history, that the probabilities are in favour of a fatal termination? (2.) What are the local conditions of the ear, or the symptoms which would point to such a conclusion? (3.) Should any special precautions be taken? (4.) Is there any treatment of a local kind that should be employed as a protecting influence? (5.) Is there any treatment which is often employed in perforations that should be especially avoided? From a consideration of these cases, as well as of many others which had come under the notice of the writer, he maintained that certain conclusions might fairly be drawn from them; at any rate, although the subject of any perforation of the membrane was in some degree of peril, those in which the bone was



diseased were in greater danger than those in which it was not. It was not difficult to determine whether the bone was affected; a careful examination with the probe under reflected light, exuberant granulations, and bony foetor would decide the question. At the same time, it should be remembered that a considerable area of diseased bone in the tympanic cavity was quite compatible with long life,<sup>1</sup> and this was especially the case if the patient had learned to manage the ear by scrupulous cleanliness, and by some sort of protective pad which would keep the external air from the lining membrane of the tympanum. Influences which might lead to a fatal ending were, the entrance of sea-water into the ear, and the use of strong mineral astringents. Thus, in estimating the probabilities of a long life for persons with perforations, their habitual discretion formed a distinct element as to their chances, and this might well be kept in view by insurance companies. Other points for consideration were, the urgent necessity of removing a polypus if it prevented the egress of discharge from the tympanum; the important bearing of head pains, whether occurring either at the commencement of the inflammation of the middle ear or at a later period; the importance, in recent cases, of great profusion of discharge, attended with feelings of giddiness. MR HAWARD said that it was agreed that any one with a discharge from the ear was in much more danger to his life than any one who had no such discharge, and that one with such a discharge might at any time pass into a condition of much danger. All surgeons saw such cases, especially among children. The question, therefore, arose, whether anything could be done to avert such danger; because, when symptoms of feverishness, great pain in the ear, etc., indicating progress of the disease towards the brain, arose, it was often then too late to do any good by treatment. If there were free suppuration, could one do anything to stop the discharge or aid its escape? Yes; if the bone or anything else in the external auditory meatus stopped the escape, it should be removed. And as some astringents seemed to set up serious inflammation, the only thing to be done was to see that the pus could escape freely. The tympanum might contain a large amount of foul discharge. In a case of pent-up matter occurring at any other part of the body, one would try to make a counter-opening to permit its escape. Similarly, should not one make an opening into the mastoid cells in order to syringe out the ear? This operation had been sometimes done too late, when the head was already affected. Might it not be done more often in order to facilitate the discharge and wash out the cavity? MR JESSETT inquired if Mr Dalby had made a post-mortem examination in his fatal cases. Only in one case did the paper speak of pus in the pleura, whilst it mentioned abscess in the brain in others. Recently he had seen a child with

<sup>1</sup> We should like to know of one or two cases where a patient has lived a long life with diseased bone in the tympanic cavity.



discharge from the ear, whose temperature was 108° Fahr. It died shortly of pyæmia, when the bone surrounding the ear was found to be much diseased, and had a pin-hole opening into the cavernous sinus, which was probably the cause of the acute pyæmia. DR HALL inquired if it would not be better for insurance companies rather to refuse to take these cases with discharge from the ear than to accept them with increased premium. DR R. J. LEE inquired what insurance medical officers were to do. He had seen a child treated for typhoid fever, in whom he found tenderness over the mastoid region. He had had discharge from the ear long before. The mastoid cells of that side had then been opened and pus let out, but death ensued in twenty-four hours. In another case a boy had had perforation of both tympanic membranes for some months, and the discharge had quite ceased for a few days. The boy was rolling about, with a temperature of 102° and 103° Fahr. The mastoid cells were then opened, and pus began to flow thence two days after the operation. From that time the patient had rapidly improved. What was one to do in such cases? Should one operate early?<sup>1</sup> Under what conditions did abscess of the mastoid cells form? Could any harm come from opening them? He thought not.<sup>2</sup> DR MAHOMED said that of course it must be the experience of aural surgeons that they had a large number of cases of discharge from the ears in which the person had gone on well through a long life. Some of the complicated cases came to be treated in hospital, and they were very striking. It was said these cases were usually seen too late for treatment to be of service. He did not think so. He had seen a patient in Guy's Hospital, who had been comatose all one night, directly after entry to the hospital, apparently from meningitis. He had swelling behind one mastoid process, which was trephined. Healthy bone at first came away, then the trephine was used again, and foetid gas and discharge escaped directly the mastoid cells were opened. When he recovered from the chloroform he had no sign of cerebral trouble, and no other convulsive fit, although convulsions had been constant before the operation. But his temperature kept up; he had pyæmia, and died with abscess of the lung. Pus was found below the dura mater, and he had plugging of the lateral sinus. He remembered two cases at the Fever Hospital, in which the mastoid cells were trephined, and the patients had recovered. Another patient had aural vertigo, and was treated with hydrobromic acid. A week afterwards he was desperately ill, had suppurating meningitis, and died, and at the post-mortem examination there was found no sign

<sup>1</sup> Yes; as soon as pain, redness, and swelling over the mastoid appear, make a free incision through all the soft tissues and periosteum, and in nine cases out of ten there will be no necessity for making an opening into the bone.

<sup>2</sup> But there is always great risk of injuring important and vital parts.—  
J. J. K. D.

whatever of disease of the ear or of the bones forming it. DR W. R. ROGERS inquired if the treatment, formerly much employed, of leeching, and blistering over the mastoid with strong iodine, was not of service. He had treated cases of aural discharge with hygienic measures, counter-irritants, and local washes, and his cases of death had been very rare. Men with discharge from the ear had not been admitted to the navy by first-rate physicians, and yet such patients were living twenty and more years afterwards. A lady he knew had had such discharge for more than thirty years, and was still very well. The President, DR ANDREW CLARK, said that all such cases were not fatal. How many were fatal? What was roughly the percentage of them that did well? What was the treatment to be adopted to avoid the peril to which they were liable? These seemed to be the chief points that the discussion had produced. MR DALBY, in reply, said he certainly did not mean to insinuate that many cases of discharge from the ear were fatal. Thousands such lived to be sixty, seventy, and even eighty years old, and then died of other trouble. The fatal cases were rare. He could not tell the proportion of fatal cases. He had seen these eight fatal cases in his private practice from 1874 to 1883, and he had seen four other cases, which, however, were not typical, so that he had excluded them from his paper. He thought perhaps 1 case in 1000, or even 1 in 2000 or 3000, might be about the percentage of fatal cases. As to the life assurance question, it would be ridiculous to reject cases for aural discharge alone, but where there was diseased bone he advised rejection. If the cavity of the tympanum were treated with care, cases with discharge might be insured; but if the patient were careless and would not take proper care of the ear, his premium should be increased. A post-mortem examination had been made in every case mentioned in his paper, except one. In that case, there were religious scruples on the part of the friends of the deceased, but a physician and himself were both quite sure beforehand, from the symptoms, that the patient was dying of cerebral abscess. As to opening the mastoid process, if there were pain upon pressure over the mastoid cells it would probably be beneficial. The operation was likely to produce much benefit, as was detailed in a paper which he had published in the Royal Medical and Chirurgical Society's *Transactions*. As to leeching, he thought that when these cerebral symptoms had come on, the time for leeching had gone by, and it was not likely then to be of much use.—*British Medical Journal*, 19th May 1883.

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#### OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

BATH MINERAL WATERS IN ECZEMA.—Dr Spender of Bath says, I never use them for the acute and chronic "moist tetter," for we



have much surer and quicker methods of treatment, but for the drier forms of dermatitis bathing two or three times a week in the Bath thermal waters is highly remedial, and is a valuable auxiliary to specific medicines by conferring on the skin a new nutritional power. This statement is more easily exemplified among private patients, as in hospital practice it is difficult to say how much of the therapeutic work is done by rest, better feeding, and more regular habits.—*Practitioner*, June 1883.

**ALOPECIA PREMATURA.**—O. Lassar has continued his observations on the nature of premature baldness, and has further convinced himself of the communicability of at least the form associated with dandriff. When the hairs which fall off in such cases are collected, rubbed up with vaseline, and the ointment so made is rubbed among the fur of rabbits or white mice, baldness rapidly makes itself visible on the parts so treated. That this is not due to the vaseline was shown by anointing other animals with the vaseline alone, which produced no effect whatever. He considers that the disease is spread by hairdressers, who employ combs and brushes to their customers, one after another, without any regular cleansing of these articles after each time they are used. During frequent visits to the hairdresser's it can scarcely fail that brushes are used which have been shortly before dressing the hair of one affected with so common a complaint as scaly baldness. Females, he thinks, are less often affected with this form of baldness, because the hairdresser more frequently attends to them at their own homes, and there uses *their* combs and brushes. In order to prevent, as far as possible, the commencement of alopecia prematura, the hair should be cut and dressed at home and with one's own implements, and these thoroughly clean. When it has begun, the following mode of treatment is suggested:—The scalp is to be daily well soaped with tar or fluid glycerine potash soap, which is to be rubbed in for fifteen minutes firmly. The head is then to be drenched with, first, warm water, and then gradually colder water. A two per cent. corrosive sublimate lotion is next to be pretty freely applied. The head is then to be dried, and the roots of the hair are to have a one-half per cent. solution of naphthol in spirit rubbed into them. Finally, a pomade of one and a half to two per cent. of carbolic or salicylic oil is to be used to the head. This treatment has now in many cases brought the disease not only to a stand, but the hair has been to a considerable extent restored.—*Berliner Klinische Wochenschrift*, No. 16, 1883.

**SALICYLIC PASTES.**—Lassar points out that to many patients even freshly prepared ointments are irritating, and he explains this by suggesting that the fatty acids become decomposed during the friction on the skin, and set up inflammation and swelling. Vaseline, used as a substitute for animal fats and oils, is not consistent enough. A suitable consistency is obtained by slowly rubbing up



equal parts of oxide of zinc and starch with vaseline. A snow-white paste is thus produced, quite permanent and serviceable as a vehicle for other medicaments. This does not become liquid at ordinary temperatures, but dries pretty quickly, and can be maintained solid if the surface is warmed by dusting powder over it. By its means parts can be kept protected from the air without any other dressing, which are not so well adapted for ointments alone. Hairy parts alone should not have it applied to them, since it mats the hairs together. The paste has no irritating effect. Its greatest advantage consists in its porosity, a feature in which ordinary salves are deficient. This is best observed after scarifications or superficial erosions and in moist eczema. The wounded surface should be cleansed with carbolic or corrosive sublimate solution, and then a two per cent. salicyl-vaseline-zinc paste is applied with a brush which has been boiled and washed in a two per cent. sublimate lotion. The paste so applied is allowed simply to dry, or covered with a thin layer of lint and turn of a bandage. In a few days the little wound has become smoothly healed without scar. Salicylic acid is specially useful in eczema, and particularly when used as a two per cent. vaseline salve or vaseline zinc paste. In the common eczemas of the head in children, so numerous in dispensary practice, after two or three thorough cleansings, the daily application of the following salve nearly always suffices to obtain rapid and lasting results:—

R Acid salicylic, gr. x.  
Tinct. benz., ℥xx.  
Vaseline, . ʒj.

M. Ft. ung.

On other parts, where a soft salve which easily melts as this is not suitable, where a firm dressing or a drying effect is desired, the following paste should be rubbed on:—

R Acid salicylic, gr. xix.  
Vaselinī, . ʒj.  
Zinci oxidī,  
Amyli, āā . ʒss.

M. Leniter terend., fiat paste.

So long as the secretion is abundant, the dressing should be daily renewed. Sometimes, when it dries hard, it tickles the skin; it should then be rendered soft by subsequent inunction with vaseline.—*Monatshefte für Praktische Dermatologie*, April 1883.

TREATMENT OF ECZEMA.—M'Call Anderson has commenced a series of papers on this in the *Journal of Cutaneous and Venereal Diseases*, and we have noted the following points on—(1.) *Constitutional Treatment*.—Purgatives and aperients must usually be looked upon merely in the light of adjuvants to or forerunners of other treatment. A long course is injurious, *except in cases entirely de-*

*pendent upon digestive derangement.* It is true that during their use the eruption may improve or disappear, but whenever they are stopped it flourishes again as luxuriantly as ever, while that debility which lies at the root of so many cases of eczema is immeasurably increased. In some cases of eczema diuretics are indicated—in those, namely, in which there is functional derangement of the kidneys, and especially torpidity of these organs. But the beneficial effects of diuretics of this class must not in every case be attributed to their diuretic action merely. For example, it is very probable that alkaline diuretics, as the bicarbonate, or neutral, as the acetate of potash, which is converted into an alkaline salt in the system, do more good in virtue of their neutralizing excessive acidity of the system. Among ill-nourished infants cod-liver oil does certain good if the stomach can bear it, especially if it is taken greedily and with relish. This is oftenest observed in children whose mother's milk is below par. In such cases, among the lower orders, the child should be fed in great part upon the bottle, a mode of nourishment which, though inferior to the employment of a good wet-nurse, is much more desirable, when proper precautions are taken, than the exclusive use of the deteriorated milk of the mother. When diarrhœa occurs among such children, though special remedies, guided by general principles, may be cautiously employed towards its removal, it is often the result of debility, in which case it may be expected to disappear spontaneously when the diet is altered and the general health improved. If the cases are those which call for the use of the oil, it does not do to allow the patient to put it aside lightly, but it should be tried repeatedly in various forms and doses, and the bowels must always be carefully regulated before administering it. Though iron is the remedy *par excellence* in pure chlorosis, in anæmic cases arsenic is infinitely more powerful. In the common class of patients who are neither chlorotic, anæmic, scrofulous, nor debilitated, but apparently, with exception of the eruption, in a good state of health, nerve tonics, especially strychnia and arsenic, are serviceable. When there is a tendency for the latter to cause diarrhœa, this is restrained by the addition of a few drops of morphia. Anderson with some pretty strong arguments defends the practice of administering arsenic in certain cases in a concealed form. He recommends, where an alkali is indicated, the use of the carbonate of ammonia, in doses gradually increasing from ten up to thirty or even forty grains thrice daily, care being taken that the preparation is fresh and of full strength. A dose of forty grains is often well borne by a patient whose stomach has been gradually accustomed to its reception, while a smaller dose often occasions vomiting in the case of those who have not been in the habit of taking it. Alkalies must be given largely diluted with water, and the dose must be gradually increased till the medicine disagrees or the eruption begins to fade. Marked benefit has resulted from the administra-



tion of tar internally, sometimes after arsenic and various local applications had failed. Carbolic acid is less active, though advantageous, in similar cases. The patient should not be alarmed if slight giddiness attends its use, especially when taken before breakfast. Sulphur, apart from its purgative properties, is comparatively useless in the treatment of eczema, unless in rheumatic subjects. Sulphurous non-purgative mineral waters owe their efficacy to the combination of salts held in solution, as well as to the accompaniments, rest, change of air and scene. It is always most judicious to take the waters at the spring itself.—May 1883.

## Part Fifth.

### MEDICAL NEWS.

LIST OF CANDIDATES who were successful for appointments as Surgeons in Her Majesty's British Medical Service at the competitive examination in London on the 13th August 1883.

| No. | Name.               | Marks. | No. | Name.               | Marks. |
|-----|---------------------|--------|-----|---------------------|--------|
| 1.  | Bradshaw, O. G. D., | 2410   | 11. | Henston, F. S.,     | 2100   |
| 2.  | Kelly, M.,          | 2375   | 12. | Durant, R. J. A.,   | 2055   |
| 3.  | Pinching, H. H.,    | 2355   | 13. | Gubbin, G. F.,      | 2030   |
| 4.  | Geddes, R. J.,      | 2350   | 14. | Myles, J. P.,       | 1980   |
| 5.  | Kelly, W.,          | 2185   | 15. | { Lesly, R.,        | 1975   |
| 6.  | O'Connell, D. V.,   | 2170   | 16. | { Birch, H. P.,     | 1975   |
| 7.  | Dodd, A.,           | 2140   | 17. | Braddell, M. O. D., | 1880   |
| 8.  | Wilson, G.,         | 2121   | 18. | Donnett, J. J. C.,  | 1870   |
| 9.  | { Reid, J. M.,      | 2105   | 19. | Sloggett, H. M.,    | 1845   |
| 10. | { Winter, J. B.,    | 2105   | 20. | Robinson, C. S.,    | 1755   |

UNIVERSITY OF EDINBURGH.—List of candidates who received the degree of Doctor of Medicine, and the degrees of Bachelor of Medicine and Master in Surgery, on Wednesday, 1st August 1883.—The following received the degree of Doctor of Medicine:—Francis John Allan, Scotland; George William Wetton Ashdown,<sup>1</sup> England; David Beattie Bain,<sup>1</sup> Scotland; Isaac Bayley Balfour,<sup>2</sup> Scotland; Alexander Hugh Freeland Barbour,<sup>2</sup> Scotland; William Baxter, Scotland; John Bright Berry,<sup>1</sup> England; Robert Henry Blaikie, Scotland; John Cameron, Scotland; James Craig, Scotland; Eustace Firth, England; Frederick William Dyce Fraser,<sup>3</sup> Scotland; James William Fraser,<sup>2</sup> England; Alfred Hartley, England; John Hassall,<sup>2</sup> England; John Hern,<sup>1</sup> England; Charles Rumney Illingworth,<sup>1</sup> England; Robert McKenzie Johnston, Scotland; Walter Smith Kay, Scotland; Thomas Preston Lewis, England; John Greig M'Dowall,<sup>1</sup> Scotland; Petrus Jacobus Retief,<sup>1</sup> Cape of Good Hope; Alex. Milne Robertson,<sup>1</sup> Scotland; Jas. Geo. Robertson,<sup>1</sup> Africa; Alex. Simpson Rose,<sup>1</sup> Scotland; Thomas Henry Smith, England; Arnold Hirst Watkins,<sup>1</sup> England; John Waugh,<sup>1</sup> Scotland; Rowland Hill Weight, England; Henry George Luther Wortabet, Syria; George More Reid, Scotland. The following received the degrees of Bachelor of Medicine and Master in Surgery:—Augustus Whitehorn Addinsell, Birmingham; Alfred Aikman, St Andrews; Charles Aitken, Teignmouth; George Forbes Alexander, Cheltenham; Edwin Bailly, Edinburgh; Percy John Bailly, Edinburgh; John William Ballantyne, Windermere; Thomas Lane Bancroft, Queensland;

<sup>1</sup> Commended for their Dissertations.

<sup>2</sup> Those who have obtained prizes for their Dissertations.

<sup>3</sup> Deemed worthy of competing for the Dissertation Prizes.



Theodore Hugh Barker, Edinburgh; William Henry Barrett, Edinburgh; Hunter Jackson Barron, London; David George Bennet, B.A., New Brunswick, Canada; Patrick Hunter Bett, Aberfeldy; William Bird, Edinburgh; John Bowes, Scotland; George Thomas Broatch, Edinburgh; Charles Brown, Dunblane; John Henry Brown, Yorkshire; Andrew Crichton Buist, Edinburgh; Thomas Marshall Buncle, Arbroath; George Schuyler Cardew, Bath; James Matthew Caw, Cupar; Edwin Albert Chill, Bassein, Burma; Michael Clark, Northumberland; Ronald Clark, Port-Glasgow; Arthur Henry Weiss Clemow, Liverpool; Charles Newberry Cobbett, Edinburgh; Philip Cockburn, Scotland; Horace Cocks, Norfolk; Sidney Alfred Comber, London; Francis Gillies Conner, Edinburgh; William Cotton, M.A., Edinburgh; James Craig, Castle-Douglas; William Cumming, Montrose; James Dalgleish, Hawick; Thomas Kennedy Dalziel, Dumfries; Daniel Rees Davies, South Wales; John Davies, Carmarthen; William Hugo Davies, Dublin; Thomas Harrison Davison, Newburn-on-Tyne; Archibald Telford Dochard, Gourrock; Archibald Donald, M.A., Edinburgh; Herbert Johnson Dring, London; Alexander Peters Drummond, Edinburgh; William Duff, Burntisland; George Duncan, Yarmouth; Thomas Edward Dyson, Bradford; David Griffith Evans, Anglesey; Thomas Johnson Fletcher, Cheshire; Boston Elphinston Fordyce, Edinburgh; William Henry Francis, Guayacan, Chili; Alexander George Fraser, M.A., Edinburgh; William Duncan Fraser, Denbigh; Arthur Fuller, Gloucestershire; Matthew Henry Gardiner, M.A., Campbeltown; Walter Chancellor Garman, Wednesbury; Robert Ritchie Giddings, Edinburgh; Frank William Albion Godfrey, Melbourne; Robert Gordon, Lichfield; William Bruce Gowans, Perth; Vernon John Greenhough, B.A., Derbyshire; Francis Walter Grierson, Dumfries; Matthew Wilkins Gutteridge, London; Francis James Hall, Mauritius; Frederick William George Hall, Allahabad, India; Patrick Brodie Handyside, Drem; Robert Hardie, Scotland; James Heath, Edinburgh; Edward Bateman Hector, Montrose; Robert Dundas Helm, Leith; John Henderson, M.A., Armagh; George Hewlett, Plymouth; John Stonely Hill, Audlem; Thomas Knight Hill, Lancashire; John Hoyle, Yorkshire; James Hunter, Glasgow; William Hunter, Birkenhead; John Hutson, B.A., Barbadoes, W.I.; Robert Inch, Abington; George Irving, M.A., Lockerbie; John Lowthian Jackson, Great Grimsby; Adam Jameson, Edinburgh; Samuel Johnson, Bengal; Charles Hampson Jones, Baltimore, India; Francis W. B. Jones, Herefordshire; John Gregory Jordan, Edinburgh; John Edward Harry Kelso, Edinburgh; John Spence Law, Forfar; Thomas Spencer Lawry, Auckland, New Zealand; William Murray Leslie, Ross-shire; Joseph Alexandre Lestrade, St Lucia; Henry James Ley, Devon; Charles Louis Lightfoot, Newcastle-on-Tyne; Henry Sanderson Lloyd, Adelaide; Robert Thomas Lorraine, Dumfriesshire; John Alfred Loudon, Coventry; Thomas Malcolm Lyon, Edinburgh; Herbert Macandrew, Dunedin, New Zealand; John Cowan M'Clew, Portpatrick; John Macdonald, Tobermory, Argyllshire; William Fraser Macdonald, Old Scone; Allan Macfadyen, Edinburgh; Alex. Duncan Macgregor, Scotland; John Archibald M'Intyre, Edinburgh; Francis Alphonsus Maciver, Edinburgh; George Mackay, Inverness; William Alex. Mackay; Archibald Mackenzie, Natal, South Africa; Robert Mackenzie, Edinburgh; Frank Irvine Mackinnon, Edinburgh; John M'Lachlan, Edinburgh; Charles George MacLagan, Berwick-on-Tweed; James Alexander M'Laren, Edinburgh; John Shaw M'Laren, M.A., Edinburgh; James Macpherson, Invercargill, New Zealand; William Aberdeen Malcolm, Dundee; Augustus Alexander Matheson, Edinburgh; Farquhar William Matheson, Edinburgh; Duncan Menzies, M.A., Aberfeldy; Alexander Cameron Millar, Fort-William; Ralph Smith Miller, Shotts; William Henry Miller, Edinburgh; David Milligan, Edinburgh; James Milne, Edinburgh; Robert Peter Mitchell, Edinburgh; Pieter de Villiers Moll, Paarl, South Africa; Arthur Rowley Moody, Edinburgh; Robert James Anderson Moore, Isle of Man; Benjamin Michael Moorhouse, Canterbury, New Zealand; Upendra Nath Mukerji, Gorepay, India; Andrew Watson Munro, Tain; Alexander Brown Murdoch, Elgin; James Adam Johnston Murray, Edinburgh; Andrew Scott Myrtle, Harrogate; John Headley Neale, Leicester; Andrew Murray Neethling, Edinburgh; Gustavus Paul Nicolet, Spa, Belgium; Gerrit Nieuwoudt, B.A., Cape of Good Hope; John Tawse Nisbet, Edinburgh; John Orr, Edinburgh; George Dall Orrock, Edinburgh; Owen Richard Pughe Owen, Dolgelley, North Wales; George Park, M.A., Dumfriesshire; Andrew Melville Paterson, Manchester; Walter Petter, Barnstaple; William Ernest Porter, Yorkshire; Alexander William Gordon Price, Betul, India; William Locking Price, Edinburgh; Joseph Priestley, B.A., Edinburgh; James Black Roberts, Aberystwyth, Wales; James Stirling Robertson, M.A., Edinburgh; Thomas Murray Robertson, Edinburgh; Arthur Robinson, Manchester; Chisholm

Ross, Inverell, New South Wales; Frank Rothera, Nottingham; Henry Davis Rowan, Edinburgh; Mark Anthony Savage, Consett, Co. Durham; Harry Scott, Edinburgh; Stanley Scott, Kelso; William Duncan Scott, B.A., Selkirk; Lloyd Grant Smith, Llangollen, North Wales; Arthur Edward Cecil Spence, Allahabad, India; William Spence, Scotland; Alexander Stables, Nairn; Arthur Cowell Stark, Edinburgh; John Steell, Edinburgh; Charles Stein, Scotland; James Robert Stevenson, Scotland; Arthur Jallard Stiles, Lincolnshire; William Malcolm Sturrock, Cupar; Allan Cuthbertson Sym, Edinburgh; George Peter Taylor, Lancashire; Andrew Thomson, Jedburgh; Daniel Gibson Pearse Thomson, Edinburgh; George Thomson, Northampton-Tweed; Richard Vassie, Lanark; John Walther, Oban; Allan Ogier Ward, Sussex; Edward Henry Warner, Edinburgh; Alexander Oswald Coward Watson, Dumbartonshire; Walter Frederick Rodolph de Watteville, Berne; James Bates Wilkinson, Hunts; Henry Arnot Wilson, Bo'ness; James Thomas Wilson, Thornhill; Theodore Stacey Wilson, B.Sc., Birmingham; Edwin Aubrey Witchell, Stroud; Alexander John Wood, Falkland; George Benington Wood, Cheshire; Thomas Wood, Scotland; Peter Yates, Heaton, near Bolton; Arthur Charles Younan, Edinburgh.

**ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.**—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held on the 28th July 1883 and subsequent days, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Alfred Everley Taylor, Scarborough; Joseph Macnab, Carlisle; Edward Joseph Fernandez, Devonport; Highett P. Westbury, Marlboro'; Charles Waller Hemming, Gloucestershire; William Steuart, Edinburgh; Odoardo Tomaso Achile Villani Van-Vestrandt, Birmingham; Robert Ashburner, Ulverston; John Hepburn, London; John Walter Burbidge, Liverpool; Benjamin Franklin Wright Hurdman, London; James Fallon, Athlone; Hubert William Burke, Bristol; John Poyntez Rice, Tralee, Co. Kerry; Frank Pritchard Mouth, Liverpool; David Anderson, Dollar; Alexander Thomas Leonard, London; Lawrence John Raymond Louis Quin, Richmond, Co. Antrim; Frederick Knollys Pigott, Edinburgh; Charles William Purves, London; Edward Morse, Somerset; Fitzgerald Uniacke Anderson, Halifax, N. S. Canada; Alfred Thomas, Lancashire; George Blake Masson, Cork; Patrick Hehvi, London; John William Walter Pozntze Edinburg; Harry Major Leckensby Williamson, Scarborough; Theodore Thomson, Aberdeen; Alexander Sutherland, Glasgow; Eugene Wilton Anderson, London; Edgar George Bulleid, London.

**ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.**—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on July 26th and subsequent days, and were admitted L.R.C.P. Ed.:—Quinten Reid Veitch, Exeter; Oliver Sunderland, Birmingham; Austin Edmond Yates Hughes, Liverpool; Alfred Betts Taplin, Liverpool; John William McVitie, Liverpool; Ignatius Joseph Rubie, Sydney, N. S. Wales; Wilfrid Howard, Norfolk; Henry Arthur Bluett Davies, Swansea; Robert Cheyne, London; Herbert George Ashwell, London; Herbert Faulkner, Teddington; John William Atkinson Wood, Manchester; Hugh William Moor, Brighton, Sussex; George Tandy Wilkinson, Caherconlish, Co. Limerick; William Cecil Fenwick, Llangollen, N. Wales; Henry Joseph Harrison, Cornwall, Canada; Francis Horton Villanueva, London; Charles Stewart Grafton, Edinburgh; William Kydd Ross, Edinburgh; Herman Martin Fröiland, Edinburgh; Joseph Harry Powell, Clifton; Joseph Johnston, Edinburgh; Albert Hawk, Edinburgh; Eustace Geo. Carter, Leeds; Percy Edgelow, London; Nicholas Philipps Elliott, London; Daniel Taylor Edmunds, London; Henry Sowter Frakes, Didsbury; George Stych Eadson, London; Frederick Edward Pearse, Frome, Somerset; Edward Cooper Fenouillet, Kent; Wm. Fred. MacDonogh, Surrey; Herbert William Steele Verity, Cheltenham; Hugh Heald, Liverpool; Charles Lethbridge Stow, Tonbridge, Kent.

**UNIVERSITY OF EDINBURGH—SECOND PROFESSIONAL EXAMINATION.**—The following candidates passed the second professional examination in July:—A. M. Adams, N. E. Aldridge, J. B. Bawden, David Berry, Alexander Bissett, Reginald Bowman, Herbert Bramwell, D. M. Brown, T. A. Brown, R. F. Burt, E. K. Campbell, J. G. Cassells, L. M. F. Christian, T. G. Churcher, A. H. Croucher, Daniel Davies-Jones, Thomas Easton, Edwin Eckersley, Francisco Fernandes, Thomas Fraser, T. A. W. Fulton (with distinction), C. H. Gage-Brown, W. D. Grieve, W. T. Gubbin, T. M. Hodgson, W. A. Holmes, T. A. F. Hood, Robt. Howden (with distinction), E. M. Inglis, Hugh John, David Laing, A. E. Langschmidt, C. N. Lee, C. L. Lempriere, C. J. Lewis (with distinction), W. G. Little, J. S. McCracken, A. G. Macdonald,



John Macdonald, W. C. M'Ewan, John M'Gibbon, Alistair Macgregor, Wm. Mackay, Wm. B. Mackay, F. L. Mackenzie, J. C. Mackenzie, A. R. Macmillan, Archibald Macqueen, L. G. Mallam, W. H. Vander Merwe, David Morgan, J. H. Neethling, C. E. Paterson, E. F. T. Price, A. C. Purchas, C. W. Purves, T. R. Rait, F. M. Reynolds, John Richards, William Richards, J. B. Ridley, J. C. Robertson, R. M. Robertson, T. H. Robinson, W. L. Ross, A. J. T. Roux, Joseph Rutter (with distinction) Y. S. Sanitwongse, Herbert Sheldermine, R. D. Shiels, A. H. Smith, Geo. Smith (with distinction), S. H. A. Stephenson, C. H. Stewart, (B. Sc.) H. J. Styles (with distinction), J. W. Stirling, J. F. Sturrock, John Sykes, John Tomlinson, J. R. Wallace, J. E. West, F. G. Westenra, R. H. A. Whitelocke, S. T. Williamson, G. E. C. Wood, J. W. Wyncoll, J. C. Young.

UNIVERSITY OF GLASGOW.—LIST OF DEGREES CONFERRED IN THE FACULTY OF MEDICINE.—The following received the degree of Doctor of Medicine:—George Richard Allan, England; Angus Campbell, Scotland; William Alexander Caskie, Scotland; David Couper, Scotland; Andrew Denholm, Scotland; John Highet, Scotland; Thomas Ballantyne Howie, Scotland; David Wood Inglis,<sup>1</sup> Scotland; David Newman,<sup>1</sup> Scotland; Edward Graham Ochiltree, Australia; Richard Prichard, Wales; Charles William Stewart, Scotland; James Mitchell Wilson, Scotland; John M. Yair, Scotland. The following received the degrees of Bachelors of Medicine and Masters in Surgery:—Wm. B. Aitken, Scotland; Samuel Alexander, Ireland; Thos. G. Alexander, Scotland; David Arthur, Scotland; Robert E. Beveridge, Scotland; Benj. Blaine, South Africa; James J. Campbell, Scotland; William Campbell, Scotland; John Clerk, Scotland; Francis H. Colvin, M.A., Scotland; John C. Crawford, Scotland; Robert Davidson, Scotland; Makhlan Lal Day, India; J. Innes Dunlop, Scotland; William Dunlop, Scotland; William A. Forsyth, Scotland; George C. H. Fulton, Scotland; Herbert M. Gay, England; James F. Gemmel, Scotland; William Gibb, Scotland; William F. Gibb, Scotland; William Gordon, Scotland; Robert Gourlay, Scotland; James Hamilton, Scotland; Wm. T. Hamilton, So. Africa; Jas. M. Headrick, Scotland; J. C. Herbertson, M.A., Scotland; Peter Hodge, Scotland; George M. Hogg, England; Thomas Howard, Scotland; Alexander Howie, Scotland; Robert R. Hunter, Scotland; Crei't Hutchinson, Ireland; Alex. Johnston, Scotland; Francis Johnston, Scotland; George G. Kenny, India; John Kerr, Scotland; James B. Lawson, Scotland; William Little, England; William Martin, Scotland; Alexander Morison, Scotland; George A. Morris, Scotland; James S. Muir, Scotland; Henry D. M'Culloch, India; John M'Donald, Scotland; Neil C. M'Donald, Scotland; John E. Macgregor, Scotland; Daniel M'Kenzie, Scotland; Hugh M. MacKintosh, Scotland; Archibald M'Lean, Scotland; J. R. Macnaughton, Scotland; David Orr, Scotland; John T. Prangnell, Scotland; Francis S. Prosser, Wales; W. F. Quaife, B.A., Sydney; David T. Richard, Wales; R. A. D. Robb, Scotland; John M. Robertson, Scotland; John Russell, Scotland; A. J. F. Skottowe, India; William Soga, So. Africa; William Stafford, England; Ross S. Steele, Scotland; Andrew Stewart, Scotland; William L. Strain, Scotland; William Vost, Scotland; Alfred Williams, England; John C. Wilson, Scotland; John Young, Scotland; Robert H. Young, Scotland; R. B. Young, M.A., Scotland; William T. Adam, Scotland; Robert M'G. Binnie, Scotland; Alexander Dickson, Scotland; James Gibson, Scotland; James Gledhill, England; John Logan, Scotland; John W. Murray, Scotland; John F. M'Gregor, Scotland; David M. Smith, Scotland; Patrick H. Walker, Scotland.

## CORRESPONDENCE.

*To the Editor of the Edinburgh Medical Journal.*

DURBANVILLE, CAPE DISTRICT,  
15th July 1883.

"*Carmedik.*"

SIR,—It may interest your readers to know that the plant, the characters and properties of which were so ably described by Dr Matthew Hay under the above name in the June number of the *Edin. Med. Journal*, has long been noted here as "known species

<sup>1</sup> Commended for Thesis.



of thistle." I have before me a carefully prepared dried specimen from the collection of the late Dr Pappe, the well-known Cape colonial botanist, and on carefully comparing the description given by Dr Hay, there appears no reason to doubt that the specimens examined by that gentleman are the same in botanical characters as the one in my possession, and named by Dr Pappe *Centaurea benedicta*, Linn. Cl. xix. Ord. iii.

In an old work entitled the "London Dispensatory," by Anthony Todd Thomson, M.D., F.L.S., etc., ninth edition, 1837, the following reference to this plant occurs under the head "*Centaurea*—official *Cent. benedicta*, Herba Edin., *Cnicus bened.*, Folia, Dublin. The herbaceous part, or leaves of the Blessed Thistle. Synonyms *Chardon benit.* (F.), *Kardebenedict* (Dutch)," etc. As the Dutch language has come to be spoken in a very corrupt form in this country, it can readily be imagined that the original *Kardebenedict* has in the course of time been transformed into *Carmedik*, the usual term now employed to denote the herb. In the work referred to above, and also in an excellent work on medical botany by Stephenson and Churchill, edited by Gilbert Burnett, F.L.S., published 1836, I find the plant fully described, and it is there stated that it was formerly cultivated in England. According to Dr Pappe it is a foreign plant, i.e., alien to the Cape flora and naturalized here, its natural habitat being the south of France, Spain, Barbary, and the Levant.

The facts here adduced, that the *Kardebenedict* is "a known species of thistle" do not detract from the great merit due to Dr Hay for being the first to give an accurate account of its chemical and pharmaceutical properties. As there are now a great number of promising young Cape men studying medicine at Edinburgh University, my cherished Alma Mater, it is to be hoped that investigations of the kind undertaken by Dr Hay, to make the profession better acquainted with the valuable chemical and therapeutical properties of the medicinal herbs and roots with which this country abounds, will lead to an ambitious desire on the part of some of the many Cape students to prosecute original researches in that direction, facilitated as the work will be by the aid of their more skilled teachers and the advantages of well-appointed laboratories. For this purpose I may indicate as worthy of special note the following as being indigenous to this country: (1.) *Melanthus major*, known as *Truytje roer my niet*; (2.) *Methyscophyllum glaucum*, or *Boschjesmans Thee*; (3.) *Hydrocotyle*, or *Perziegras*; (4.) *Arctopus echinatus*, or *Platdoorn*; (5.) *Tanacetum multiflorum*, or *Wormkruid*; (6.) *Elytropappus rhinocerotis*, or *Rhenosterbosjes*; (7.) *Leonotis Leonurus*, or *Wilde Dogga*, and a great many others, a short description of which will be found in Dr Pappe's *Prodromus Floræ Capensis Medicæ*.—I am, etc.,

A. G. H. BÖSENBERG, M.B.,  
District Surgeon, Cape Division.

## OBITUARY.

## JOHN ALEXANDER SMITH, M.D.

THE death of Dr John Alexander Smith has deprived the medical profession of one of its most esteemed members. Circumstances made it unnecessary for him to press for professional work, but he was an accomplished physician, and his honourable character and kindly nature gave him a wide and useful influence, which he exercised in a modest and unperceived manner.

He was born in Edinburgh in June 1818, and was educated in the High School. His father, Mr James Smith, was an architect, and the last holder of the office of Her Majesty's Master Mason for Scotland. Dr Smith took his degree in medicine from the University of Edinburgh in 1840, and in 1865 he became a Fellow of the Royal College of Physicians. On the death of Dr Somerville in 1874, the Fellows of the College chose him as their treasurer, and he continued to hold that honourable office till the time of his death. No one ever held the position who discharged its many duties with greater fidelity and efficiency. He had the goodwill and confidence of all who were associated with him in the administration of the affairs of the College, the prosperity of which he had greatly at heart.

His scientific tastes went strongly in directions which took him away from strictly professional studies, and his circumstances allowed him to gratify these tastes. He was perhaps more of a naturalist and an archæologist than of a medical man. Indeed, he occupied a very distinguished position as a student of natural history and antiquities, and his work in these directions led to large and important additions to knowledge.

For upwards of thirty years he was a prominent member of the Royal Physical Society. He succeeded the late Sir Wyville Thomson as its secretary, and he held that position for twenty-one years. On resigning it he was elected president of the Society, and at the end of his three years of office in November 1876 he opened the 106th session of the Society with a thoughtful and able address, in which he made reference to "works on the principles of biology, as it is called, and on such subjects as the Origin of Species, the Descent of Man, the Variations of Plants and Animals under Domestication, and Man's Place in Nature," and contended that the theories propounded in these works struck "absolutely at the root of all revelation, and therefore at all the aspirations and hopes of man." During his connexion with the Society as secretary, and no doubt largely through his influence, numerous papers were read at its meetings which embodied important results of careful original research. Among the writers of such papers there were many men of great distinction as naturalists, who are no longer among



us, but whose names and work will never die—such, for instance, as Robert K. Greville, John Goodsir, Strethill Wright, John Fleming, Hugh Miller, Charles Maclaren, and Robert Chambers. Dr Smith's own communications to the Royal Physical Society were largely connected with the ornithology of Scotland. So widely was he known as an authority on this branch of natural history, that seldom did a rare bird appear in any district of the country without early intimation of the fact reaching him.

Dr Smith's work in connexion with the Royal Society, of which he became a Fellow in 1863, was less voluminous than the work he did in connexion with the Royal Physical Society, but it was perhaps of a higher character. He appears as a contributor both to the "Proceedings" and "Transactions." He was scarcely less of an authority on fishes than he was on birds, and rare specimens were often sent to him by missionaries and travellers. In the beginning of 1865 he received from the Rev. Dr Alexander Robb, one of the missionaries of the United Presbyterian Church, Old Calabar, a package containing some zoological specimens preserved in spirits, and, on examination of them, he at once saw that they "belonged to the very distinct and interesting order of the Ganoid (*Erpetoichthys*) fishes so abundant in a fossil state in the rocks of our earlier geological epochs, but of which so few representatives are now to be found as living inhabitants of the present waters of our globe." Forming, as it did, an addition to the family *Polypterini*, Dr Smith's elaborate description, with illustrations, of *Erpetoichthys*, was honoured with a place in the Society's "Transactions." Of fishes belonging to the great sub-class of the *Teleostei*, Dr Smith also described two new specimens from West Africa—one being *Ophiocephalus obscurus*, and the other *Synodontis Robbianus*.

In conjunction with Professor Turner he wrote *Observations on some Negro Crania from Old Calabar*, which appeared in the *Journal of Anatomy* in 1869. Besides contributing other articles to the *Journal of Anatomy*, Dr Smith wrote, as long ago as 1853, occasional papers for the *Edinburgh New Philosophical Journal* and other scientific magazines.

Archæologists would probably regard Dr Smith's reputation as a scientist as depending chiefly on the good work he did in the field of science which they cultivate; and prominent as he was as a naturalist, he certainly cannot be said to have been less prominent as an archæologist. He had a wide knowledge of the whole subject, but he was acknowledged, by those best able to judge of such matters, to be the best-informed man in the country regarding that important branch of the science which deals with the remains of those animals which have become extinct in Scotland in times which are long past from one point of view, but which are comparatively late from another. The more noteworthy of the many papers which he contributed to the Transactions of the Society of Antiquaries relate to the discovery in Scotland of the



remains of the reindeer, the great auk, the elk, the rhinoceros, the bear, and the raven. He also wrote important papers on the wild cattle of Great Britain, and the origin of our domestic cattle. It was often suggested to him by the writer of this notice that it would serve a useful purpose to bring those papers together in a volume, and so make them of easy access to scientists. Dr Smith also from time to time communicated papers to the Society of Antiquaries, in which he discussed in an exhaustive manner certain classes of objects—such, for instance, as the ornamented stone balls, the massive silver chains, and the bronze armlets, which are found in Scotland.

He was twice Vice-President of the Society of Antiquaries, first from 1870 to 1873, and afterwards from 1875 to 1878, and for a great many years he acted as one of its secretaries, being successively the colleague in the secretaryship of Dr Daniel Wilson, Dr Stuart, Dr Arthur Mitchell, and Mr J. R. Findlay.

He had the honour of being a corresponding member of various foreign societies, but it was often said that he seemed better pleased when honours of this kind came to other people than when they came to himself. He was so reluctant to depreciate the labours of scientific fellow-workers that it was not infrequently remarked that he allowed statements as to supposed original discoveries to go unchallenged, when he could have shown that these discoveries had been made and announced by himself years before.

He was a man of unobtrusive but deep piety. Though a steady Liberal, he took no active part in political strife. He was never married, and those most closely related to him who survive are his sister, Mrs Campbell, with whom he lived for many years, and her son, a surgeon in the Scots Guards, and a man of much promise, towards whom Dr Smith had the feelings of a father.

It was in January of this year that Dr Smith began to experience the symptoms of the disease which ultimately carried him off—a malignant tumour affecting the upper jaw. For some months he suffered great pain, but during the last weeks of his life his sufferings did not appear to be great. When summer came he contemplated going to country quarters in Roxburghshire, as for some years he had been in the habit of doing; but when it became evident that the end could not be far off, he was prevailed on to spend the closing days of his life within easy reach of the many who knew and loved him, and he accordingly contented himself with removing from his residence in Palmerston Place to a villa in Churchill, Morningside, where, so long as he was able, he enjoyed the air of the garden attached to the house. He died there on the evening of the 17th August.

## Part First.

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### ORIGINAL COMMUNICATIONS.

#### I.—AGAIN ON AXIS-TRACTION FORCEPS.

By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Midwifery and the Diseases of Women and Children in the University of Edinburgh, and President of the Edinburgh Obstetrical Society.

*(Communicated to the Edinburgh Obstetrical Society, 11th July 1883.)*

Two years and a half have passed since I read to the Society a communication on Axis-Traction Forceps. The Fellows will remember that I applied this designation to the forceps invented by M. Tarnier, or such modifications of them as I ventured to commend to the use of my fellow-practitioners. Their essential feature consists in their having traction-rods joined to the proximal end of the blades, and curving backwards towards a transverse bar which serves as the traction-handle of the instrument. The attachment of rods to the blades allows of direct traction on the head in their embrace. The backward compensation curve (perineal curve, it is sometimes called) of the rods allows of the traction by a curved instrument through a curved canal without loss of power, and without misdirection of force. The jointing of the rods allows the advancing head to move the application handles in the constantly-changing direction along which it is travelling; and the direction of the application handles thus furnishes the operator with an unerring index to the proper line of traction.

Since these Tarnier forceps were discussed among us they have been discussed in many associations, and by many writers, and the voices are still so discordant that it seems as if a final judgment as to their value were still far off. I am anxious to bring them up again in the Society, that we may have an opportunity of considering some of the objections that have been advanced to their use, and some of the suggestions that have been made for their improvement.

In taking up the adverse criticisms that have been made to Tarnier's forceps, I notice that they have already earned for themselves the sure note of a permanently valuable invention, that it is

said of them, They are not new. Dr Albert Smith, *e.g.*, in the able and lively paper in which he introduced the discussion in the American Gynecological Society,<sup>1</sup> alleges that the Tarnier instrument is only a resuscitation of the disused apparatus of Hermann of Berne. Hermann saw as clearly as any of us do, and indicated very forcibly, the difficulty of extracting the head with a curved instrument through a curved canal. He felt the necessity of correcting the loss and misdirection of the power that results from traction through the handles, by making pressure in the neighbourhood of the lock from the front (above, if the woman be on her back), or by dragging on the lock from behind (below, if the woman be in the dorsal decubitus). To correct this loss and misdirection of power, one practitioner would rest the end of the long handles of the forceps on his shoulder while making traction with both hands clasped round the lock. Another would drag on the handles, and press with his knee upon the lock. I have seen an obstetrician who had committed the traction to two assistants pulling by the hooks at the handle-ends, himself with his hands clasped round the lock close to the vulva, pulling in a backward direction. I remember assisting Dr Kirk in my native town, nearly thirty years ago, in a difficult case, where two of us made traction on the handles and on a towel tied round them, while he manipulated the lock and shanks so as to press back the head into the hollow of the sacrum. Now Hermann's contrivance simply consisted in applying an instrument like a two-pronged fork, with a transverse bar for a handle, into two depressions close to the forceps' lock. The fork is so contrived that it may be applied either from the anterior (upper or pubic) aspect, so as to make backward pressure while traction is made through the handles, or from the posterior aspect closer to the blades, so as to make backward traction to correct the loss and misdirection of force applied to the handles. But this ingenious attempt of Hermann to render more precise the point at which the corrective pressure is applied, has nothing in common—and I wish broadly and again to emphasize my allegation—with the Tarnier traction-rods, which make traction, I repeat, directly on the head-embracing blades; which have a compensation curve allowing of direct traction in the axis through which, at any given moment, the centre of the head should move; and which are guided in the course of their action by the constant change in the direction of the application-handles—change permitted and produced by the loose jointing of the traction-rods to the heels of their respective blades. Dr Smith seems to think that Hermann's contrivance was lost sight of, only because he had not the opportunity of proclaiming its value from a professorial chair. He seems not to know that not only was Hermann Professor of Midwifery in the Univer-

<sup>1</sup> "Axis-Traction with the Obstetric Forceps," *Transactions of the American Gynecological Society*, vi. 291, 1881.



sity of Berne—he enjoyed also the Persian blessing of being succeeded in his office by his son. No; his suggestion fell dead, because, as Dr Smith's paper shows, its object can be effected just about as well or as ill with the unarmed hands. From Dr Smith's own drawings we can see him attempting to avoid loss of power and misdirection of it by clasping his hand over the neighbourhood of the lock, and making backward pressure with the ulnar edge, while the thumb pushes the extremities of the handles upward and forward; and Hermann made the same attempt, by pulling with one hand on the handles, and pressing with the other, by means of his fork, on the lock.

There is more force in the allegation that Tarnier's forceps is the same in its principle of action as the forceps with recurved handles of Hubert or Aveling. Hubert and Aveling have both, and I believe independently, demonstrated the impossibility of making correct traction with forceps having curved blades and straight handles. They have both, accordingly, advocated the use of instruments made with a compensation or perineal curve on the handles. In this the Tarnier forceps precisely corresponds with such S-shaped forceps. The compensation curve on the traction-rods, where they approach the traction handle, has precisely the same effect as the curve in the handles of the scientifically constructed forceps of Hubert and Aveling,—the effect, namely, of allowing direct traction in the axis of the pelvis without loss or misdirection of effort. But while the Tarnier forceps has the correct axis-traction curves in common with both these forceps, it has, in addition, the distinctive feature of having the traction-rods (as I have already said more than once) so jointed to the blades that the movements impressed on the application handles gave a constant guide to the operator as to the direction in which we ought to pull. Now this double property of the Tarnier forceps—of, *first*, giving power of correct traction, and, *second*, giving a guide to the proper direction—puts the obstetrician who uses it at a great advantage over the operator who has only an ordinarily curved instrument in his hand. It is vain to tell us who have employed such axis-traction forceps that you can do so and so with the older instrument. We fancy we know precisely what we can do with that. We have used it in all imaginable cases, and have had recourse to the various manipulations recommended with the view of obviating the loss and misdirection of power that their construction involves. In the simple cases—and these, to be sure, constitute the majority of forceps cases—we have accomplished the delivery of the child to our perfect satisfaction, and without the expenditure of much strength or skill. But cases have sometimes met us that tried all our strength and taxed all our skill, that sometimes baffled us completely, or were terminated by the extraction of a damaged child from a damaged mother. And now we find that the axis-traction forceps enables us to effect delivery in

such cases with less expenditure of energy and with more precise direction of power; hence, not only with more ease and comfort to ourselves, but with more safety to the woman and the child. Let who will continue to use ordinary curved forceps, an obstetrician who has used the Tarnier forceps in a few test cases will no more think of reverting to the other than a man who can afford to keep a carriage will continue to practise as a peripatetic. He may use the defective instrument occasionally to keep muscle and mind in exercise, or because the case is so easy that it can be finished with anything, as he may walk to some patient's house for the sake of his own health, or because she lives in the same street; but in the general run of his work, and in all his difficult cases, the axis-traction forceps becomes for him a valued necessity.

Objections have been offered to the Tarnier forceps in regard to its construction. It is a misfortune that in his earliest models Tarnier had the compensation curve not only on the traction-rods, but on the application-handles. This curve in the handles was to my own mind one of its drawbacks. When we have become familiarized with the introduction of curved blades with straight handles, we feel as if we had to learn all our lesson over again when we begin to use an instrument with recurved handles, even of the simplest form, such as Hubert's or Aveling's. In his more recent models Tarnier has quite done away with the curve in the shank and handles, retaining only the curve of the traction-rods.

Objection continues to be made to the use of the fixation screw, which is supposed likely to cause and keep up too forcible compression of the head of the child, as if it could impart to the forceps something of the character of the cephalotribe. But it is important to remember that whatever the kind of forceps employed, the head is inevitably compressed. In the testing cases the operator who pulls on the head by grasping the ordinary handles, compresses the head with a force which he loses all power of estimating, and which perhaps he only realizes when he sees it imprinted, as it has been times without number, on the scalp or even skull of the infant. The use of a fixation screw enables the operator to compress the head to a degree which his unstrained muscular sense enables him to appreciate with great precision. He has only to fix the screw at the point where he feels that he has obtained a grasp of the head that is sufficient to hold it fast and that is safe in its amount of compression. It thus, as Professor Howard of Baltimore has clearly recognised and fittingly stated, comes to be a "regulation screw," preventing the justly-dreaded danger of over-compression of the head.

To my own axis-traction forceps the objection has been offered by Dr Barnes that the instrument is too small. I have never yet met with a case where the model I exhibited to the Society did not suffice to reach the head and extract it even when the head lay above the brim. But I know no reason why the forceps should



not be made as long as those of Dr Barnes, at least as regards the blades and shanks. The forceps I have recently used accordingly measures 9 inches from the lock to the tips of the blades.

Besides thus increasing the length of the forceps, I have, at the suggestion of Dr Hart, made a slight change in the flattened extremities of the rods to which the knobs are attached. It was found that the head of one of those knobs or buttons was liable to break, because the rods met the locking-plate at an angle. But by making the flattened ends of the rods pass at an angle from the stem and lie parallel to the locking-plate, all risk of such an accident is obviated.

Dr Lyon objected that the traction-rods were not of sufficient strength. This difficulty also it would be easy to overcome. But I have tested the rods that I have had in use, and find that a weight of 200 lbs. does not strain them; and I do not suppose that in my most difficult case I have found it necessary to apply nearly half that force.

It is interesting to notice some of the other modifications that have been suggested to be made on the Tarnier forceps.

Professor Lusk of New York has applied traction-rods to a Tarnier forceps modelled after the pattern of the Wallace forceps, which is widely used in America. The contrivance by which the rods are jointed to the traction-handle is simpler than in Tarnier's forceps, but is liable to the objection that the traction-handle may be mislaid.

Dr Lyon of Glasgow has made a forceps with removable traction-rods, each rod being hooked into a rounded aperture just below the fenestrum. The rods move freely on a ring instead of a locking-plate, by which they are permanently attached to the traction-handle.

Sänger of Leipzig has applied the principle of axis-traction to German forceps as follows:—Two strips of leather, 35 centimetres in length, 1·5 centimetre broad below, but diminishing in breadth to 1 centimetre at the upper end, are softened in warm carbolized water, and fastened by a slip-knot to the lower angle of each blade, so that the knot lies below. The forceps are passed in the usual way. A third loop of leather is buckled round the lock, and through this loop the leather traction-bands are drawn. This serves the double purpose of holding the handles of the forceps together like a fixation screw and keeping the leather bands so far parallel to the shanks. For this last leather strap Säger afterwards substituted an ordinary elastic ring pessary, which gave more play than the leather. Through a slit in the free ends of the leather traction-bands, a cross bar of wood is passed, which serves as a traction-handle. According as the traction is made with the leather bands parallel to the handles, or forming a wider and wider angle (up to a right angle), the direction in which the traction is made will vary. "This angle," says Säger, "can be made so large that the traction-bands form a curve corresponding to the traction-rods of Simpson's instrument, that is to say, make traction in the



axis of the same. Traction can be made in any direction from an acute up to a right angle. . . . Those two leather bands, the cross bar of wood, the elastic ring adjusted in the manner described, as a means of traction, as an aid-forceps, attain with absolute simplicity the same mechanical result as the iron traction-rods of Tarnier and Simpson." But I would observe, that as soon as traction is made with the leather bands at an angle to the handles, the point to which traction is applied is no longer the blade of the forceps, but the elastic ring, and the results of such traction will be simply to pull the handle of the forceps backwards. To counteract this, and produce traction in the axis of the pelvis, we must pull on the handles of the forceps at the same time. It is only by chance that the resultant of these two tractions would be a force acting in the axis of the pelvis. Sanger's modification is, however, of great importance, as showing that the principle of axis-traction is being recognised in Germany, and his leather traction apparatus was a step in the right direction. In a more recent communication (*Archiv fur Gynekologie*, B. xx. H. 2), he describes a forceps which he proposes to call the "German axis-traction forceps," and which is designed after the Simpson-Tarnier model. It consists of a pair of ordinary Busch forceps, with traction-rods attached. These are, however, modified in two points—(1.) The locking-plate for the traction-rods is made so that it can be removed; (2.) There is no fixation screw, Sanger regarding it as unnecessary in the German lock. In order to keep the lock more firm without such a contrivance, Sanger makes his traction-rods curve inwards, and approach each other below the lock. When the forceps are applied, the traction-rods spring easily together below the lock, so that it cannot yield. He, however, indicates the necessity, in the absence of a fixation screw, of sometimes holding together the application handles.

Breus has designed a forceps of a somewhat different type. He describes this instrument as follows:—"Each blade consists of two parts united by a hinge, the fenestrum or blade proper and the handle. The upper part possesses a somewhat small fenestrum, and behind this, on its outer aspect, has a blunt semicircular border, terminating in a round, flat depression with a smooth floor. The upper border of the fenestrum is prolonged into a small rounded steel rod, which follows the curvature of the shank until about 3 centimetres in front of the lock. Here it curves upwards at an obtuse angle, and terminates about 8 centimetres beyond this curvature in a small ring. To distinguish it from the fenestrated part (the blade proper), this steel rod may be called the 'continuation of the blade.' The lower half of the forceps consists of the shank, lock, and handle, or, in other words, the parts behind the fenestrum, as in the ordinary forceps. The rounded end of the shank forms a circular plate, which fits into the hollow on the outside of the fenestrated portion, and is thus jointed to it. The

joint which unites the two portions of each blade is thus made up of two circular plates about 2 centimetres in diameter, through which a pin passes and forms an axis of rotation for the joint. The edges of the plates are carefully rounded off, so that no wounding of the soft parts may be caused by them. By means of this joint the relation of the blades to the handle can be altered in a marked degree. . . . The metallic rod which passes through the two rings at the ends of the continuation of the blades proper is about 9·5 centimetres long, and furnished with a flat knob at one end to prevent its slipping out of the ring. For the same purpose two barbed springs jut out at the other end. The projecting extremities of these springs are so formed that they easily pass, without compression by the finger, through the ring, and yet prevent the falling out of the metal rod. With a quick pull at the other end the springs fall together, and the rod can thus be easily drawn out when we require to remove the forceps. The metallic rods, 'continuations of the blades,' which regulate their position, curve forwards at an obtuse angle about 3 centimetres in front of the lock, in order that the movements of the hand laying hold on the Busch projections (the traction-hooks) may not be interfered with, and also so that they do not hinder the locking of the forceps" (*Archiv für Gynäkologie*, B. xx. H. 2).

The remaining lower part of the instrument, where it is locked, and by which traction is made, requires no further description, as it differs in nothing from the ordinary Viennese forceps. The hinge, the continuation of the blades, and the metallic rod, are all that distinguish this forceps from those in ordinary use.

In Breus's forceps the traction is made by the ordinary forceps handles, the appended rods simply serving to indicate the direction of movement of the head. He claims as an advantage for this form that the forceps are kept on the head and the pressure regulated by hand instead of a screw. If the handles of a forceps constructed on this fashion were re-curved, so as to give them a perineal or compensation curve like those of Hubert and Aveling, they would come near to possessing the advantages of the Tarnier instrument. As they stand, though the steel rods, "the continuations of the blades," furnish a guide to the proper direction for traction, the straight form of the shanks and handles, even though they are jointed to the blades, do not furnish the medium for direct axis-traction.

Every effort to improve the axis-traction forceps is a witness to the value of the principle on which they are constructed, and M. Tarnier, who has repeatedly modified the form of his own forceps, has shown no jealousy of the proposed modifications. Doubtless, changes will yet be suggested which will be found to render the instrument more manageable without compromising its utility. I can easily believe that in the process of evolution the application-handles will become lighter and less, and the locking plate more simple



and at the same time more secure. But whatever changes may be effected in the construction of the forceps, it seems to me that the perfect instrument must, *first*, have its traction-rods permanently attached each to its own blade. It is no advantage, but a drawback, to have the traction-rods so contrived that they may be used in one case and not in another. No operator who has the option of making axis-traction should ever expose himself to the temptation of pulling by the application-handles. I began myself with the error of fitting removable traction-rods to our British forceps, but quickly learned that the rods were a necessity for every case,

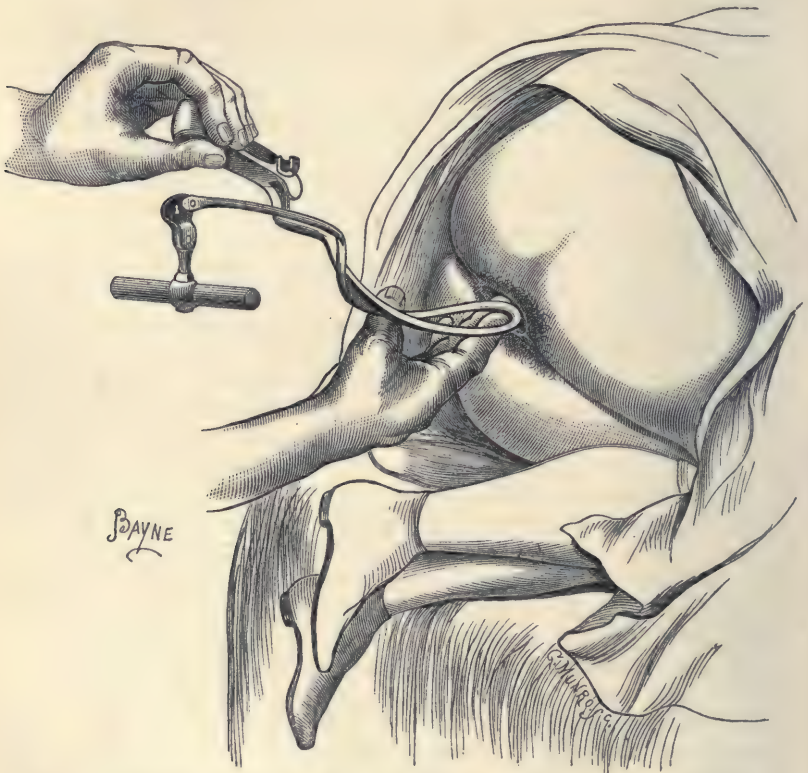


FIG. 1.—Application of the first or left half of forceps, with traction-rod and traction-handle permanently attached.

and must be permanently attached to their respective blades. I think, even, that there will be no loose or separable part of the instrument, as in Tarnier's and Lusk's models, when the instrument is perfected.

This leads me to remark, *second*, that the traction-rods must be so contrived as to be capable of being easily locked and unlocked. Perhaps, for example, instead of having them to meet in a locking-



plate, as in my model, the traction-handle might be attached to the left rod by a ring, into which the right rod could be hooked. Then, *thirdly*, the fixation screw must be applied close to the lock, and be capable of easy manipulation, because, after each tractile effort it is well to relax it, and it must again be fixed before renewing the effort.

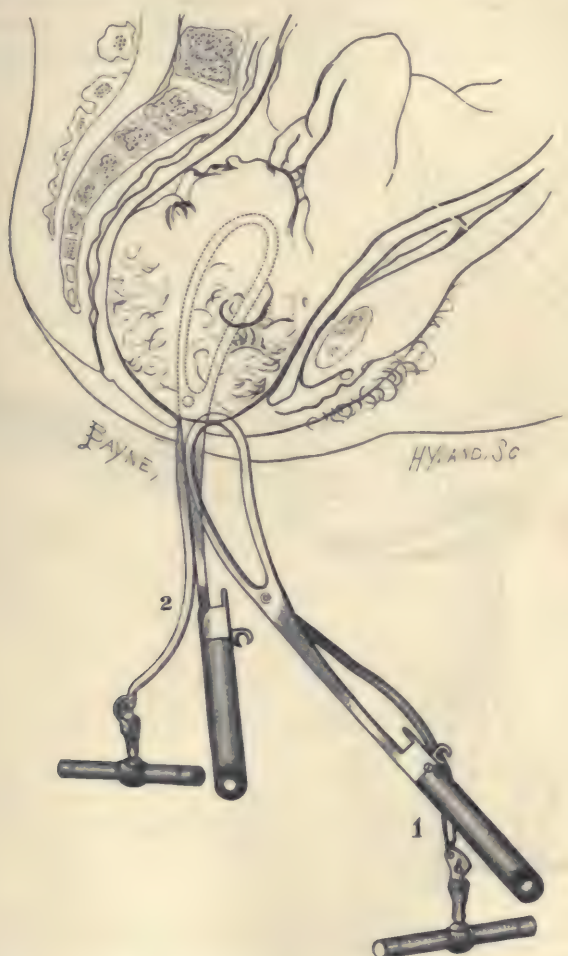


FIG. 2.—Introduction and adaptation of the first or left half of axis-traction forceps. 1, shows the traction-rod pushed in front of the shank during the process of introduction. 2 shows the traction-rod restored to its position when the blade has been adapted.

And now, before closing, I will try to show you that the introduction and adaptation of forceps furnished with permanently attached traction-rods, offer no greater difficulty than in the use of our ordinary forceps.

The left half of the instrument, is, as usual, to be first introduced. This has the traction-bar or handle attached to its traction-rod; and if the rod be pushed in front of the shank it offers no difficulty to the manipulator. The handle should be held in the left hand, and guided into the canal with the fingers of the right, as seen in Fig. 1. The blade having been passed according to the usual rules, and adapted to the head, the traction-rod is pushed back to its ordinary position (see Fig. 2). The traction-bar is loosely jointed and swings freely about without at any time

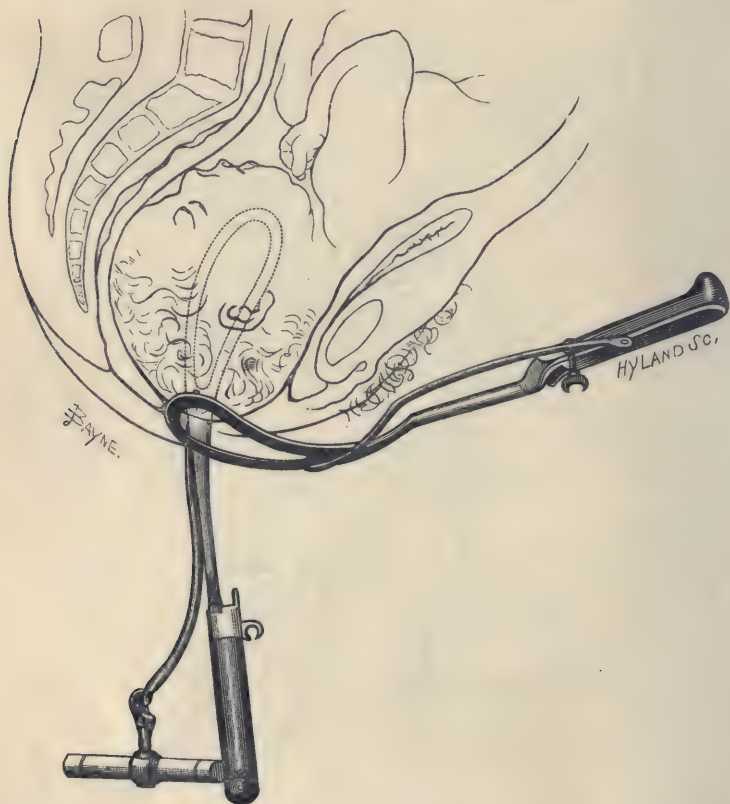


FIG. 3.—Commencement of introduction of the second or right half of axis-traction forceps, showing the traction-rod pushed forward past the shank.

interfering with the passage of the second blade. When the patient is placed, as she commonly is with us, on her left side, it is not even necessary to take the precaution of pushing the left traction-rod in front of the shank. But in introducing the right half of the instrument, it is in every case necessary to push forward the traction-rod (see Fig. 3). If it be left swinging backwards it is apt to get entangled in the left half of the lock.

This blade (held as usual by the right hand, and guided with the left) having been passed first backwards towards the hollow of the sacrum, and then round so as to be applied to the side of the child's head (see Fig. 4), the operator pushes back the traction-rod, and proceeds to lock the instrument in the usual way.

I was at one time afraid that in cutting off the German traction-hooks or shoulders we should be deprived of the power of easily adjusting and locking the blades, which we obtained by placing



FIG. 4.—Second or right half of axis-traction forceps carried further on in the hollow of the sacrum, and moving toward the side of the fetal head.

the thumbs on these lateral projections in our old familiar forceps. But I find that the projections of the fixation screw on the anterior surface afford the same facility. If, therefore, after the traction-rods are in their proper place, we grasp each handle with its own hand, and place the thumbs on the two parts respectively of the fixation-screw (see Fig. 5), we obtain a purchase for moving the blade in any direction so as to secure their proper adaptation and their easy locking.



So far the application of axis-traction forceps corresponds to the application of the ordinary instrument, but for the necessity of shifting the position of one or both of the traction-rods. But now, further, we proceed to lock the loose right traction-rod by passing its knob or button into the slot in the locking-plates (see Fig. 6).

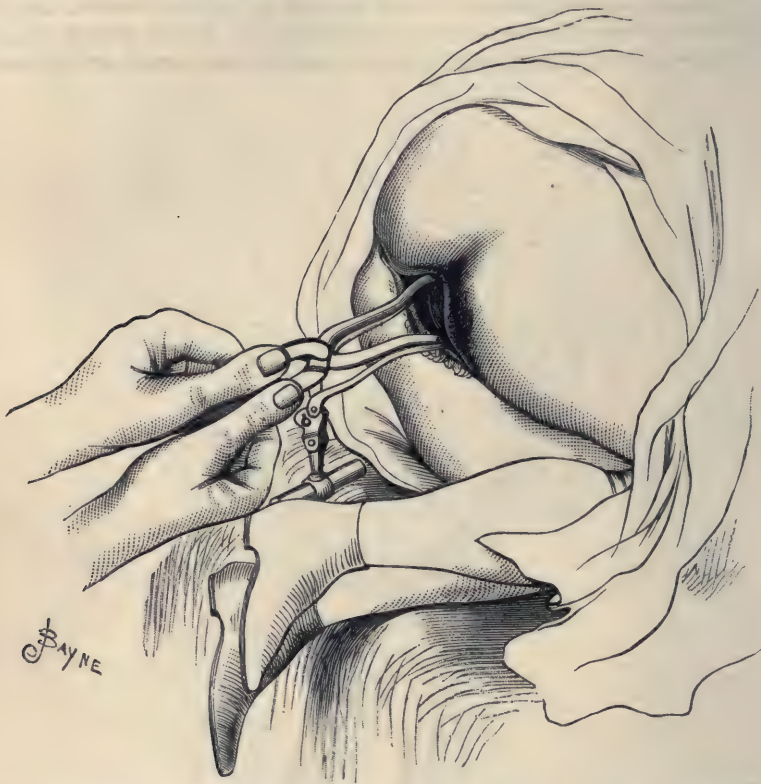


FIG. 5.—Mode of locking the blades after the traction-rods have been thrown back to their proper position.

This manœuvre is not difficult, and is done in a second or two after we have practised it for a few times either on the phantom or when simply holding the forceps in the two hands. The locking is effected by laying hold of the application-handles with the right hand and the traction-handle with the left. (See Fig. 7.) The thumb of the right hand lays hold of the free extremity of the right traction-rod, the forefinger of the left hand brings the locking-plate into relation with it, and so the locking is effected.

When an obstetrician has taken the trouble to apply to the head of the child a pair of axis-traction forceps, he finds himself more than compensated by the additional power he finds himself able to employ in the difficult cases, the delicacy of touch with which he feels that he can manage these cases, and the certainty

with which he can pull in the pelvic axis in every case. Before applying traction, however, he grasps the application-handles until he feels that he has got a hold of the head so firm that the blades will not slip, yet not so forcible as to produce injurious pressure. At this point he secures the fixation screw. He then proceeds to make traction with one or both hands, grasping the transverse bar or traction handle. In the great majority of cases the traction is made with the right hand alone, the left being free to watch the



FIG. 6.—Locking-plate and joints of the traction-handle (full size). *a*, Joint for rotation of traction-bar; *b*, Joint for lateral movement; *c*, Opening and slot for locking of right traction-rod; *d*, Left traction-rod permanently jointed to locking-plate.

progress of the head and guard the perineum. Traction is made as usual during the pains, and when no pains are present, at intervals. After each tractile effort the fixation screw may be slackened, to be fixed again before the next pull. The most important rule to be observed in using axis-traction forceps is, *to keep the traction-rods parallel with the shanks*. When the rods are parallel with the shanks, the cord of the pelvic curve of the blades runs in a straight line to the centre of the traction-bar, and hence traction on the bar carries the head along the axis of the pelvic

plane occupied at the given moment by the foetal head. As the head descends the application-handles must never be touched, and they can be seen to move more and more forwards until at last,

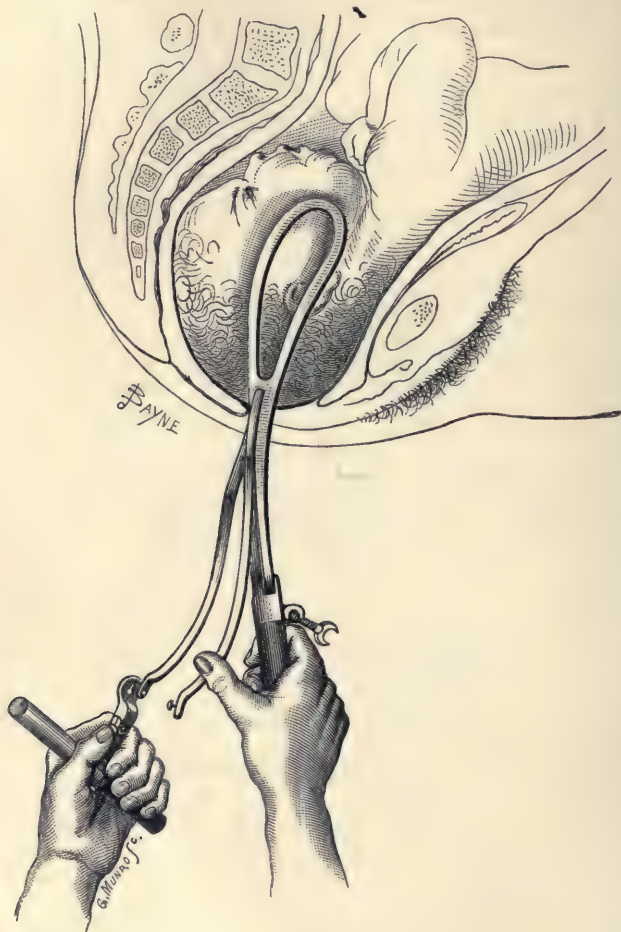


FIG. 7.

as the head emerges from the outlet, they lie nearly parallel with the abdominal wall.

I have already said that the use of properly curved traction forceps is necessary in every part of the parturient canal. And now, with regard to the perineal part of the canal, I wish to remark especially that axis-traction forceps with jointed rods enables us to guide the head more accurately along it. We can feel more distinctly the amount of strain we put on the tissues, can more delicately prevent too rapid expulsion of the head during parturient



effort and make traction when the effort is passing off, and can all the time be sure that the head is progressing in the safest direction.

When the head is born the fixation screw is first relaxed and the right traction-rod unlocked, and then each blade can be slipped off in turn.

I may sum up these remarks in the following propositions:—

I. The extraction of the foetal head through any part of the curved parturient canal demands the use of a forceps having the pelvic curve (curve of Smellie and Levret).

II. Extraction with such an instrument cannot be made without loss of power and mis-direction of power, unless the handles have a compensation curve (perineal curve of Johnstone, Moralés, Hubert, and Aveling).

III. The addition to the blades by a joint or hinge of compensationally curved traction-rods gives the possibility of correct axis-traction, while the change impressed on the direction of the fixed application-handles affords an index to the operator as to the line in which at any moment he ought to pull (axis-traction rods of Tarnier).

The literature of the subject is given very fully by M. Tarnier in the fourth volume of the *Transactions of the International Medical Congress*, and *Annales de Gynecologie*, 1882, xvii. 401; and in a work which has just been written by Dr Pouillet of Lyons, *Des Diverses Espèces de Forceps*, Paris, 1883.

## II.—NOTES OF CASES TREATED IN WARD XIX. OF THE ROYAL INFIRMARY.

Reported by SKENE KEITH, M.B., C.M., Surgeon for Out-patients to the Samaritan Free Hospital, London, and Surgeon to Vincent Square Hospital for the Diseases of Women, Westminster.

(Continued from page 206.)

CASE I.—This patient was 32 years of age, and was sent by Dr Laurence of Montrose. She had a multilocular ovarian tumour of rapid growth, free from adhesion. The operation was the first ovariectomy performed in the New Infirmary, in the large theatre, on the 13th January 1880. The strictest Listerism was carried out. The operation lasted half an hour. The tumour was friable and was broken up; its weight was 32 lbs. The cautery was used in dividing the pedicle. Whether the patient got chilled on her way downstairs to the operating-room,—being first etherized and then carried on a cold day down two flights of stairs and along a draughty corridor into the heated theatre,—or whether, as is more probable, the absorption of carbolic acid could be blamed, I cannot

tell, but in the evening the temperature had risen to  $105^{\circ}2$ . She was excited, and said that she was so well that she could get up and walk about. Fortunately by this time we were getting accustomed to high temperatures on the evening of the operation performed under carbolic spray, and though this temperature was the highest in a simple case hitherto observed, no great alarm was taken. Her head was laid in three or four French ice-bags, and by next evening the pulse and temperature had fallen to below 100. She was out of bed ten days after, and, beginning to walk too soon, had a slight attack of phlegmasia dolens of the left leg, though the right ovary was the one removed. After this there was a rule made that no patient, however well she might seem, was to be allowed out of bed till fourteen days had passed since the operation, a regulation in many ways to be commended.

CASE II.—The *sage-femme* of Orbost was sent for operation by Dr Maclean of Skye. She was 57 years of age. She could speak no English, and none of us could speak any Gaelic. A patient from another ward interpreted, and the following history was obtained:—The tumour had been of slow growth. From time to time, especially during the last two years, she had suffered severe attacks of pain, confining her to bed for weeks at a time. On these occasions relief was to some extent obtained by resting on her elbows and knees, and this position was maintained at times for days. The tumour filled the pelvis, and felt as hard as bone. The abdominal portion was cystic. Operation, on the 24th January, occupied one hour and twenty minutes. It was a dermoid tumour, adherent in the pelvis all round. Parietal, omental, and intestinal adhesions were general and firm, and difficulty was experienced in securing some bleeding points from the bad arrangement of the light. Care was taken to prevent any chill as she was carried to her room, and her head was rolled in a soft shawl, so that no cold air was breathed. As she left the theatre the temperature was  $72^{\circ}$  F., while that of the corridor was little over freezing. She made a good though slow recovery.

CASE. III.—A feeble, emaciated, half-starved looking, patient woman, 30 years of age, the wife of a miner, was sent by Dr M'Kerrow of Workington, and was admitted on the 23rd of February, with a very large ovarian tumour. She had been tapped once at the Cumberland Infirmary. A large ulcerated uterus lay between the thighs. There was also cystocele and rectocele. She had suffered severely at different times, and had the tumour during at least one pregnancy. Having a large family to look after, she had never been able to take the least care of herself, but had to work on as best she could. She looked a most unpromising subject, yet, as the distress from tension was great, operation was performed two days after her admission. There were extremely firm parietal



adhesions extending over the whole of the parietal surface requiring great force to break them down. The omentum was also adherent. The ribs were much elevated, and from under them came a very large and unlooked-for mass of semi-solid tumour. This was broken down and the whole removed through an opening six inches in length. Much difficulty again arose in securing some bleeding points high up on the wall at the edge of the adhesions. A very broad, though long, pedicle was divided by the cautery. The weight of the tumour was 44 lbs., and the operation lasted 50 minutes.

The day was chilly, and by the time she was got into bed she was cold and collapsed, and did not get warm for several hours. By evening she looked pale and ill. The pulse was 118, but the temperature, which was at first very low, had only risen to 98° eight hours after operation. By daybreak there was much pain. At the morning visit the aspect was bad, the face being small and shrunk, and the feebleness was great. Pulse was 128, temp. 102°·5. As the day went on she became intensely cyanosed; the lips, teeth, and tongue became as dry and black as peat. She was unable to speak—at least, though the lips moved, no articulate sound could be made out. She lay on her left side low down in the bed and was exceedingly restless. The skin was harsh and dry, the urine dark, scanty, and contained some blood. Whisky was given freely, both by mouth and rectum, and, if vomited, was given again. The pulse and temperature continued high all day. She was kept quiet by morphia, and was stimulated as much as she could bear. By evening she was not worse, and was keeping stimulants well. The second night was passed fairly well, and slow improvement followed, though she was unable to speak except in a whisper for many days. As there was no one at home to attend to her children, she would not remain longer than thirty days, and went away looking feeble and thin. Some time after Dr M'Kerrow wrote to say that she was quite well, and nine months after her return he again wrote to say that she had just been confined of a healthy child.

CASE IV.—An unhealthy-looking woman, 52 years of age, was sent by Dr Fraser of Cruden. She had a small ovarian tumour, with some free fluid. The tumour was closely connected to the uterus. She had got cold on her way from the north, and was in bed with pleurisy for three weeks before operation. The fluid in the right pleura remained about stationary, when, on the evening of the 3rd March, it was noticed that the cyst had burst. She was then feverish, with a foul loaded tongue, etc.; but as there seemed to be little chance of her getting into a better state for operation, and almost a certainty that she would get into a worse, ovariectomy was performed in her room on the following day. She was too feeble to risk removal. The abdomen was filled with thick viscid



fluid, which was all sponged up. There was close adhesion to the caecum, which required dissection, and to the right side of the uterus. The tumour was a mass of papilloma, and weighed 12 lbs. The general condition was at first relieved by the operation, and nothing unusual happened till the third day, when she began to complain of pain in the back. Temp. rose to  $101^{\circ}$ , and pulse to 120. This was followed in the evening by free hæmorrhage from the kidney, and the passage of some large clots caused much distress. The urine was bloody for the three following days. Recovery was afterwards uninterrupted, and the pleuritic effusion had disappeared when she left the hospital twenty-six days after operation. She came back two months ago—nearly three years after—looking in excellent health, but there was evidence in the pelvis that secondary affection of the peritoneum had taken place.

CASE V.—A young girl, in her fourteenth year, sent by Dr Rankin of Airdrie. She had suffered from repeated attacks of pain. Parietal adhesions were very extensive and firm, and the omentum came in between the tumour and wall. Hæmorrhage was unusually copious, and there was again difficulty in securing bleeding points from the badness of the light in the large theatre. After the operation had lasted an hour, the wound was closed—the bleeding not being by any means arrested. For some days pulse and temperature were very high, but she was running about the room a fortnight after.

CASE VII.—A married woman, aged 28, was sent by Dr Watt of Ayr, with a moderate-sized ovarian tumour, surrounded by free fluid. Some of this was removed for examination, and was found to be fluid from a burst ovarian cyst. The uterus was large, the fundus occupying the hollow of the sacrum, and the os was pressed against the pubes. Pregnancy, with a retroverted uterus, was diagnosed, though the patient did not consider herself pregnant. There were only omental adhesions, which were transfixed and tied in portions with catgut. The abdomen was sponged dry, and the uterus lifted out of the pelvis. The cyst walls weighed 20 lbs. The pedicle was divided by the cautery. There were no unfavourable symptoms, and Dr Watt wrote to say that she was confined seven months after the operation, at the full time.

CASE VIII.—A soldier's wife, aged 38, was sent from Ireland for operation by Dr Browne of Dundalk, who had tapped her once with some relief. She had suffered much pain, and had been long confined to bed. There was evidently extensive adhesion. The tumour was semi-solid. There was great cedema of the abdominal wall and loins, of the labia and lower extremities. The pelvic cellular tissue was also infiltrated. The uterus was low in the pelvis, and quite fixed. Nothing could be gained by tapping any of the cysts. The pulse was quick, and there was high night

temperature. The case was looked upon as not a favourable one. Operation on 20th March. The wall was thickened, and adhesions in front were general and firm. All the tissues were infiltrated with serum. The tumour was opened and broken up. The cyst formerly tapped contained some pus. The omentum was spread over the front of the tumour, adherent everywhere. Adhesions were extremely firm, and were continued into both lumbar and iliac regions, behind the pubes, to the bladder and fundus of the uterus, where hæmorrhage was very free. The intestines were all matted together, and were firmly adherent round the uterus, thus blocking up the pelvic cavity, so that no drainage tube could be passed downwards beyond the fundus of the uterus. There was no pedicle, and vessels were tied as divided. The operation was tedious, lasting nearly two hours. A very large number of vessels were tied, and more blood was lost than is usual in bad cases. Large sponges were put in, and allowed to remain for some time, to soak up as much as possible of the serum from the cedematous tissues. This was poured out in great quantity. A very short drainage-tube was left in, but it was adjusted with difficulty in the middle of the incision, near the umbilicus.

There was vomiting during the afternoon and evening, and all the dressings were soaked in blood, as well as the bed all around. The sickness continued during the night, and there was pain from flatulence. Towards the evening of the second day the pulse had risen to 140. There was general distention, and she complained of a feeling of suffocation, fainting, and want of air. Towards morning vomiting became very severe, and much serum was forced through the tube. In this case no proper measurement of the fluid could be taken, as from the shortness of the tube it was apt to get displaced, and the discharge escaped into the cotton-wool dressing. Vomiting ceased on the third day after operation; soon after flatus passed downwards. The tube was removed on the fifth day, by which time all œdema of the wall, labia, and limbs had passed away. She left the hospital twenty-four days after.

CASE IX.—A tall, very healthy-looking woman, 39 years of age, from Inverness-shire, with a very large ovarian tumour hanging down over the thighs to near the knees. It had existed with at least one pregnancy. The abdominal wall was brawny and cedematous. Operation on the 27th of March. The incision was nine inches. There were very extensive parietal adhesions in great broad bands in all directions, containing masses of red vessels. The omentum was so adherent that most of it was cut away. Adhesions were very firm in both iliac fossæ and also to the fundus of a large uterus. The other ovary was the size of an orange. Both pedicles were divided by the cautery. All bleeding was carefully stopped. A number of long red vessels about the



uterus and pelvis were tied with catgut ligatures. A glass drainage-tube was left in. The operation lasted one hour and a half. The weight of the tumour was 74 lbs. This was a healthy subject, and she recovered easily without a bad symptom, and with scarcely any rise of pulse or temperature.

CASE X.—Sent by Dr Service of West Boldon, in the hope that the patient was not too late for operation. She was 49 years of age, tall, and emaciated. She measured 64 inches at the umbilicus. She was first tapped in August 1876 in the Newcastle Infirmary, when 13 quarts of fluid were removed. In June 1877 the quantity had increased to 20 quarts. She was tapped once a year for the next three years, the quantity having now increased to near 7 gallons. Operation on the 3rd of April lasted 50 minutes. Adhesions were general and firm all over to the wall, and in breaking these down the cyst gave way and the abdomen was flooded with the contents of the cyst. On pulling the cyst walls out rather hurriedly, the connexion to the right side of the uterus was torn away. There was no proper pedicle, and vessels were tied. None were of any size. There was troublesome oozing from the wall, which did not stop easily, and it was going on somewhat when the wound was closed. The cyst walls and contents weighed 77 lbs. There was free discharge from the tube for several days, no less than 40 ounces of thick syrupy blood having been removed during the first two days. The highest temperature was  $102^{\circ}1$  on the second day, when she was flushed and thirsty, with a dry tongue. After a few days she did well, but her long exhausting illness had weakened her, and her strength came back slowly. She remained in the hospital for seven weeks after operation.

CASE XI.—This patient was 22 years of age. The tumour was of five years' growth, and was an enormous sarcoma. Relief had been sought in many quarters in vain. Finally she was told that the tumour was cancerous, and that she could not live many months. After this she took to bed, and remained there for a whole year. Then she came into the hands of Dr Stewart of Langholm, who sent her in to Dr Keith, who advised her to take the chance that ovariectomy now offered every one with that disease.

The tumour felt quite solid. It filled the abdomen, which measured 46 inches at the umbilicus. The bladder was drawn upwards to near the umbilicus. The tumour also filled the pelvis close to the anus, and was evidently very firmly adherent to the back of the vagina. Repeated examinations showed that the rectum was free. No trace of the uterus could be discovered. The doubts and difficulties of the operation having been already explained to her, operation was performed on the 2nd of April. Just as she was about to get ether, she made the request that the tumour should be removed, be the risk what it might. This was done, mostly by careful dissection, and after tying nearly a hundred vessels. After



two hours and a quarter of hard work—and not a moment was lost—she was put back into bed, collapsed and pulseless. It is impossible to describe this operation, which was perhaps the worst of all this series. Suffice it to say, that on exposing the tumour it was found that both ovaries and uterus and bladder were so completely incorporated that removal at first seemed hopeless. The fundus of the uterus was seen sticking out of the mass like half a potato; both broad ligaments had been opened up when the ovaries were small, running together and forming one tumour as they grew. The fimbriated ends of both tubes were found, when the tumour was removed, within a few inches of each other, quite on the highest part of the tumour, which was lying in the epigastrium. The right tumour had carried up on it the broad ligament, pushing upwards and inwards the head of the colon, and bulging out the right loin. It was no ordinary adhesion, but an entirely new structure, from which the tumour was removed. The separation was made entirely by dissection. There was no tearing, or as little as possible. The tumour was not cut away for an hour after the operation was begun. Nothing almost was gained by an attempt to break it up, and much of its juice and blood from it escaped into the abdomen. The greatest trouble from hæmorrhage was in the pelvis, and the tumour was removed from the vagina entirely by the scissors. Much force was used in turning out the tumour, and when it was out the uterus and bladder were lying on the thighs. The cautery was freely used in searing the edges of the lacerated tissue that originally represented the right broad ligament. A drainage-tube was left in. The weight of the mass removed was 41 lbs.

She was surrounded by hot bags on being placed in bed, and hot whisky-and-water were injected into the rectum. Five hours after operation the temperature was only  $97^{\circ}2$ ; the pulse could not be counted. Eight hours after the temp. was  $99^{\circ}$ ; the pulse seemed to be about 180, but still almost imperceptible. At midnight the temp. had risen to  $102^{\circ}5$ , and the pulse was distinct at 170. There was some vomiting from flatulence; only 3 ounces of pure blood from the pelvis. It would require a small book to fill the details of the ups and downs in this case. On the sixth day the pulse was down to 135, but the temperature varied exceedingly, ranging from  $102^{\circ}4$ , the lowest, to  $105^{\circ}$ , and even higher. At the end of the first week some catching pain was felt over the spleen, and after some days there was distinct hardness under the ribs. During the second and third weeks the wound, which had quite healed, began here and there to open up and suppurate. The swelling under the left ribs slowly increased, and there were chills and often high fever. On the 28th day a trocar was put deeply into this swelling, and some putrid, dirty, purulent fluid was got away. She was much exhausted by this, and it was proposed to give her chloroform and cut down upon this swell-

ing. She was so feeble that this was put off till next day. The swelling was then softer, and it gradually diminished. Rapid improvement at last came, and she left after a residence of three months in the hospital. Her health is now excellent, and she is probably safe from a return.

CASE XII.—A domestic servant, aged 32, was operated on in April 1881. She was tapped six years before by Dr Keith. There was then evidence of extensive adhesion in the pelvis, and she was advised to return for operation when the cyst refilled. She was a perfectly healthy woman. There was no refilling of the cyst for five years, and she was quite able for her work. Then sudden refilling took place, and she was tapped five times by Dr Smith of Dumfries. She suffered, however, much from irritable bladder, but her general health was excellent. She was in hospital upwards of a month before her turn came for operation. The tumour was not very large. Operation lasted three-quarters of an hour. A large spray took in patient, operator and assistants, so that not a hand nor sponge once passed beyond the spray cloud. There were omental adhesions. There were firm adhesions from about three inches above the pubes and downwards behind the pubes to the bladder, utero-vesical pouch, and side of uterus. There was no pedicle. Most of this adhesion was so firm that it was cut. About thirty catgut ligatures were left in. It was mentioned at the time, before closing the wound, that without spray a drainage-tube would have been used, but it was hoped that there would be little oozing, for though the adhesion was unusually firm it was limited, and the spray would keep everything sweet. Ten hours after operation she was quite comfortable; temp.  $99^{\circ}1$ , pulse 88. Twenty hours after—night bad from vomiting and towards morning from pain in left iliac fossa; flatulence troublesome, looks ill; temp.  $99^{\circ}$ , pulse 140. Thirty hours after—vomiting off and on all day, now “mouthfulling” as the nurse calls it—that is, the patient lay with a small dish under the chin, constantly squirting out mouthfuls of dark fluid; temp.  $101^{\circ}1$ , pulse 150. Forty hours—night bad, restless, vomiting more feeble, though the abdomen is soft and flatus passes freely. Died 70 hours after operation. Post-mortem examination showed a very limited patch of lymph over the seat of pain; nine ounces of dark red serum in the pelvis; every organ healthy. The death was thus caused by acute septicæmia. Drainage would probably, almost certainly, have prevented this. This case was quickly followed by another.

CASE XV.—Patient, aged 22, from Barrow, transferred from Professor Fraser's ward; part of clinical class present. Tumour very large, 60 lbs.; tapped five times; carbolic spray with same precautions as in former case, only that the sponges were used wrung dry directly from the 5 per cent. solution—the first and

almost the only time this strength was used. Operation lasted 75 minutes. Incision 7 inches; general parietal and omental adhesions; extensive and firm adhesion deep in right lumbar region, under surface of liver, and to the insides of the ribs, whence blood was seen to trickle from numerous points. Broad pedicle divided by cautery, and a glass drainage-tube left in. Report ten hours after operation—temp.  $101^{\circ}$ , pulse 134; a wild fixed pain all afternoon over the region of the liver, cutting across the abdomen. Three hypodermic injections necessary to check pain; six and a half ounces of thick dark serum on sponges, and as much of nearly pure blood removed from the pelvis. Twenty hours after—temp.  $101^{\circ}1$ , pulse 144-8. No sleep; restless with legs, and vomiting, looking ashy pale and ill;  $5\frac{1}{2}$  ounces of dark red serum from pelvis; flatulence troublesome; some fulness of epigastrium. Thirty hours after—temp.  $104^{\circ}$ , pulse 144; very restless; vomiting all afternoon. Now looks ill, and is vomiting, "mouthfulling" like the previous patient, and squirting up the same brown-looking fluid; three ounces of red serum from pelvis. Forty hours after—temp.  $103^{\circ}$ , pulse 126. No vomiting since 5 A.M.; only one ounce and a half of red serum. Fifty hours after—temp.  $102^{\circ}8$ , pulse 122; one ounce red serum from pelvis. Seventy hours—temp.  $102^{\circ}8$ , pulse 86; one ounce reddish serum from pelvis; tube removed; rapid recovery. That this patient would have died without drainage I think there can be no doubt. The contrast between these two cases was very remarkable.

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### III.—SURGICAL EXPERIENCES IN THE ZULU AND TRANSVAAL WARS, 1879 AND 1881.

By D. BLAIR BROWN, F.R.C.S. Edin., Army Medical Department.

*(Concluded from page 224.)*

#### GUNSHOT INJURIES OF THE LEG.

As in cases of gunshot injuries to the forearm, a great many cases where the tibial and fibial shafts are broken by a bullet can be treated conservatively if done early in their history. It is chiefly in cases where conoidal balls hit the shaft of the femur that the extensive splitting of the bone beyond the locality of the injury is found. When the same occurs to the bones of the forearm or leg, the injury is more of a local character, though less so than when a round bullet had done the mischief.

CASE I.—No. 1107, Corporal P. W., of the 58th Regiment, was wounded, at Lang's Neck, in the right leg. The bullet entered the head of the tibia near the outer tuberosity, there tunnelling down to the anterior tuberosity or tubercle and making its escape. When I saw the



case there was a wide, gaping opening into the articular end of the bone, and for about three inches down the shaft anteriorly the bone was quite bare, with separation of the integuments over it, allowing a probe to pass all round. The discharge of pus was very copious and foul. No loose bone was found. I placed him under chloroform, made an incision through the integuments covering the bare shaft, and with bone forceps removed that portion. I then gouged out all the soft carious bone from the interior of the head of the tibia, and applied strong nitric acid to the surface of the cavity. The result was that for several weeks small portions of bony tissues came away, and, being black, the patient went by the name of the "coal-box" amongst his comrades in the hospital. The case had an uninterrupted course towards recovery. The large hole did not fill up much, but the bone around became thicker, so that he was able to get about very well, assisted by a stick. Nearly a year after the operation I met this man in the streets of Dover. He came up and spoke to me. I found he was walking without a stick. On inquiry I found there was still a hole in his leg, but it was quite healed, and his leg as strong as ever. He was looking very well, and employed as one of the Government station keepers on the royal military canal near Hythe, a duty which kept him on his legs all day.

CASE II.—Trooper L., of the 15th Hussars, was employed by the commanding officer of Mount Prospect camp to take orders to two companies forming a reserve at the foot of the Majuba Hill, after the repulse. In this duty he was shot in the right leg. The bullet passed through the right tibia about its middle, making a large hole at point of exit. I found several sequestra present, which I removed, also a portion of the shaft of the bone, which was dead, bare of the periosteum, with the end sticking prominently across the open wound. I enlarged the wound and cut out all this portion of the shaft. The case at once did well, and the limb became strong. He is now a waiter in the cavalry canteen at Aldershot.

CASE III.—Seaman C. H., of the Naval Brigade, belonging to H.M.S. "Dido," while in the camp at Mount Prospect, near the Majuba Hill, on the 22nd February, was accidentally shot in the leg with a revolver. One of his fellow-sailors was cleaning the weapon, not knowing it was loaded; it went off, and produced the following injury in this man's leg:—The bullet entered the inner side of the tibia anteriorly, about four inches above the malleolus, and, passing in the same line as the bones, passed through them and lodged superficially between the fibula and skin. The bullet had been removed when I took charge of the case on the 17th April. On examination I found the limb very much swollen and cedematous, the wounds discharging the most profuse and foul pus. A probe passed into the shaft of both bones, finding sequestra and

bare bone. Considerable constitutional distress ; hectic was present. Patient very anxious to get relief.

25th April.—I amputated the leg at the “seat of election,” with anterior and posterior flaps, dressing it in the manner advocated. The fibula 4 inches above the ankle was smashed for over  $1\frac{1}{2}$  inches. Several sequestra of bone were here found imbedded in the tissues, quite dead. In the tibia, about the same distance from the ankle, a large hole was present nearly 2 inches long and  $\frac{3}{4}$  of an inch wide. The bone posteriorly was intact. The medullary canal was quite open. This cavity was full of putrescent matter, pieces of flattened lead, and, except at the edges of the shaft, where there was a slight attempt at the formation of callus, there was no other effort of nature to throw off what was causing the mischief, or to fill up and heal the wound. The upper fragment of the fibula for over 2 inches was quite bare of periosteum—dead.

26th April.—Temperature less than last night.

27th April.—Stump looking very well ; tubes acting satisfactorily ; no discharge elsewhere.

29th April.—Holds his own stump up to be dressed to-day. Case doing very well.

30th April.—Pus in some quantity coming through tubes. Stump looking well, cool and normal.

1st May.—Stump all healed round, except points where the tubes are. Upper tube discharges freely ; very little coming away from the under one. All the ligatures but two are now away. Several of the sutures removed.

6th May.—All the sutures out, as well as ligatures ; one tube in, as a little discharge still present.

10th May.—All healed, and patient moving his knee a little. Shortly after this he was sent down country *en route* to England. A few weeks after I arrived at home I received a letter from this patient. He is employed in a shop all day, and has to walk to and from it during the day, a distance of over three miles. He finds no difficulty whatever in performing this distance, and he does “a good day’s work.”

In this case I thought of operating lower down the leg than the “seat of election,” but am glad I did not, for two reasons. First, had I done so, I must needs have performed a second one higher up, owing to the nature of the injury of the shaft of the fibula, which could not have been diagnosed earlier. This is a circumstance one must not forget in cases of gunshot injuries treated expectantly where there is evidence of œdematous swelling and general brawniness of the limb. The second reason is one that field surgeons should also consider. It is generally the rule in surgery to save all one can. In the leg, however, after-utility is a most important consideration, and if we can make a limb more serviceable by taking it off just below the knee than if it was



taken off in the middle, or even just above the ankle, we should do it. Artificial limb makers consider that it is a very simple and satisfactory matter to make a substitute of the most economical and serviceable kind for legs which have been removed near the knee, while for those taken off further down the difficulty and expense is greater and the result less satisfactory. The effect is that a man of the class our soldiers usually belong to, whose leg has been taken off low down, is obliged to get a contrivance in which he places his knee, while his leg sticks out uselessly and hideously behind. The patient whose case is just related states in his letter that "a neighbour of his has a leg taken off just above the ankle, and he is very sorry it was not operated on as his was," higher up.

#### INJURIES TO GENERAL OFFICERS IN THE FIELD.

When one considers what a general of an army or a division in the field is, the immense interest which centres in any accident occurring during such periods to such officers is not to be wondered at. It has been my duty to treat two well-known general officers when serving in the field in South Africa. A short summary of their cases may be read with interest.

CASE I.—Major-General N., when he was collecting his division at Landman's Drift, on the Natal border, previous to the advance into Zululand, met with the following accident. He was out, mounted on a fine English horse he had brought from home with him, having a look at the nature of the country. As in most parts of South Africa, numerous ant-bear holes existed amongst the grass, and the native bred horses are very sharp in detecting and avoiding them. In this case the general's horse's foot went down in one, throwing the rider. I found he had broken his fibula, and there was the usual displacement of the foot in such injuries. Newspaper correspondents, staff officers, etc., all wanted information. The division might move any day—what was to be done? My medical chief and I had a consultation, and we kept the secret between us. The general had got a severe bruise.

When the swelling was subdued I put the limb up in plaster of Paris. Fortunately the force did not move for three weeks, and the general was able to transact his office duties in his tent. The order for advance, however, came, and, though in considerable pain, my patient was lifted on to his saddle each day. In this way he continued, and even commanded his division in Zululand and at the battle of Ulundi, with his leg in plaster of Paris. There was a little more callus than would have been thrown out under less adverse circumstances, and in consequence the ankle was weak and stiff for a long period. However, it got quite well, and he never complains of anything connected with his leg now.



CASE II.—Major-General D. L., who commanded the cavalry in the Zulu war, was afterwards sent out for a like purpose to the Boer war. The peace negotiations had taken place, however, by the time he arrived in the country. When Sir Evelyn Wood was in Pretoria, General D. L. was left in command of the force around Newcastle. Returning on one occasion from the camp at Bennett's Drift to his quarters at the camp near Newcastle in the dark, his horse stumbled, and, being taken unawares, threw the rider, injuring his side. I found the whole of the injured side of the chest very painful, and the fifth rib at its junction with the sternum broken. The cartilage was evidently ossified. The movement, causing constant slipping backwards and forwards on inspiration and expiration, was very painful. I put on a large cork, cut to fit the locality, and secured it along the whole side of the chest with stripes of adhesive plaster. Then a firm broad bandage was put round the chest, with shoulder-straps. This effected a cure. In a month all this constriction was removed, and the bone maintained its position.

#### THE HOSPITALS IN WHICH THE WOUNDED WERE TREATED.

The wounded from Rorke's Drift, on arrival at Helpmakaar, were accommodated in the end of a corrugated zinc shed. This was one of several, filled with commissariat stores, chiefly bags of maize. Many of them had been exposed to the heavy rains then prevailing before being stored, and were decomposing and giving off the most offensive smell. Long square boxes containing biscuits were arranged along the side of the building, and empty sacks laid over them. This was all the bedsteads and bedding obtainable for more than a fortnight, during which time stores were slowly making their way from the base of operations at Maritzburg. The only medical stores in my possession at this time, with a garrison composed as stated below, was a field companion, a case containing pills, powders, bandages, and tourniquet, and usually carried suspended from the shoulder of an attendant, and a box containing eight bottles of brandy and ten of port wine. The usual printed label showing the contents of the pills and powders, etc., in the field companion had been removed, so that one had to trust to one's memory alone in using them.

|                              | Officers. | Men. |
|------------------------------|-----------|------|
| Royal Artillery, . . . .     | 4         | 66   |
| 1st 13th Regiment, . . . .   | 1         | 73   |
| 1st 24th Regiment, . . . .   | 7         | 110  |
| 2nd 24th Regiment, . . . .   | 0         | 45   |
| Medical Department, . . . .  | 2         | 3    |
| Commissariat Department, . . | 1         | 6    |
|                              | —         | —    |
| Carry forward,               | 15        | 303  |

|                               | Officers. | Men.  |
|-------------------------------|-----------|-------|
| Brought forward,              | 15        | 303   |
| Veterinary Department, . . .  | 1         | 0     |
| Mounted Infantry, . . .       | 4         | 95    |
| Mounted Police, . . .         | 3         | 84    |
| Natal Mounted Volunteers, . . | 4         | 49    |
| Royal Engineers, . . .        | 2         | 2     |
| Mounted Basutos, . . .        | 4         | 80    |
|                               | <hr/>     | <hr/> |
| Total, . . .                  | 33        | 613   |

Thus making a grand total of 646,—with the exception of the garrison at Rorke's Drift, all that remained of the headquarters column,—a large force to find one's self in medical charge of after one of the most unexpected disasters—Isandhlwana—our army ever encountered, and a very trying position for any medical officer to be placed in.

The wounded after Ulundi were treated in the admirable double bell tents, and afterwards in hospital marquees. No better hospital could be found for surgical cases, provided they are stationary. However, for more than a week the camps were frequently being changed, and in consequence the wounded suffered not a little from the exigencies of service in such a country as we were operating in. How different is the case in Europe, where, even when an army is forced to retire, the wounded can be left behind in charge of their surgeons with perfect safety. All the cases treated in these tents did well. Personally I would prefer treating cases of severe gunshot injuries in a well-pitched marquee than in a hut with foul walls and uncertain ventilation. In the Boer war, the hospital at Newcastle to which I was appointed consisted of a series of thirteen square huts, the walls of which were formed of sunburnt bricks plastered with the gummy earth procured from ant-hills, so plentiful in the country. The roofs were thatch. The huts were arranged regularly in four lines, three in each, with the odd one some little distance in the rear. These buildings had been used for a long time as the permanent barracks of the garrison, the separate one in the rear as the hospital. This hospital hut was called "No. 10," each of the huts having a number. The station, Newcastle, in the Zulu war had a notoriety for the numerous cases of enteric fever occurring at it, all the cases of which were treated in No. 10 hut. On the break-out of the revolt in the Transvaal the whole of these buildings were placed in charge of the Medical Department, to form their base hospital, and which, as I have said, all the wounded passed through on their way to Natal and England, as well as the majority of the sick at the station who required treatment.

No. 10 hut played an important part in the history of this

hospital, being the one to which the most serious cases were removed. The patients in it fell to me as part of my duty. Naturally I had misgivings about it as regards the surgical success of treatment in such a building which had not even been whitewashed since its use as the "general" hospital of the garrison. The groans and agonies heard and witnessed in it were enough to give one an idea of what must have taken place on an larger scale in recent European wars, and made one feel how much we have, in every detail, to learn before we can plume ourselves as too many are apt to do at present. Every case in this hut had subsequently severe surgical operations performed upon them, but not a single one died. It was indeed a contrast to see the poor fellows, minus a leg, arm, or joint, in about two months afterwards, all up and about, chaffing one another, and singing snatches of cheerful songs. Never did I feel the truth of the words of Goethe more, when he remarks, "It is often said the world is ungrateful. For my part, I have never known it to be thankless when one has discovered the proper mode of rendering it a service."

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#### IV.—CLINICAL CASES OF DISEASES OF THE THROAT AND NOSE.

By G. HUNTER MACKENZIE, M.D., Lecturer on Practical Laryngology in the School of Medicine, Edinburgh.

*Case of Laryngeal Stenosis after Measles; Tracheotomy.*—A male child, aged 4 years, was brought to the Western Dispensary on 19th April 1883, on account of difficulty in breathing, and alarming convulsive seizures. The illness dated from about the age of six months, when the patient had an attack of measles, followed soon afterwards by hoarseness, and latterly by aphonia and dyspnoea. The child would not permit of a satisfactory examination of his larynx, so that its exact condition could not be ascertained. The symptoms of laryngeal obstruction were so prominent, however, as to clearly indicate tracheotomy, which was performed the same evening, with the assistance of Mr Maxwell Ross. The child made an uninterrupted recovery from the operation. Four months afterwards he was unable to dispense with the use of the tube for any length of time, necessitating a consideration of the question whether further operative measures should be had recourse to with the view of removing the permanent laryngeal obstruction. It was felt, however, that some additional time must necessarily elapse before this point could be definitely settled, and the child is meanwhile to continue using the tube.

*Case of Papillomata of Right Ventricular Band; Paralysis of Right Vocal Cord; Removal of Growths by Intra-Laryngeal Method.*



—The patient, a man aged 50 years, was sent on 5th July 1883, by Dr Stewart, Kirkwall, on account of hoarseness and dyspnoea, which failed to yield to ordinary methods of treatment. The complaint was of  $3\frac{1}{2}$  years' duration, and appeared to owe its origin to laryngitis after getting wet. The symptoms now present were hoarseness, stridor, mainly inspiratory and augmented on exertion, and pain radiating into the ears. On laryngoscopic examination the right vocal cord was seen to be completely paralyzed, and springing from the right ventricular band was a sessile trilobular growth, the largest lobule being about the size of a pea, centrally situated, and projecting into the glottis. The general mucous membrane of the larynx was in a state of chronic inflammation. Two days afterwards the central and most prominent lobule was removed by Mackenzie's rectangular forceps, and on a subsequent day the smaller posterior lobule was also removed, Dr J. T. Leask being present at the operation. It was found impossible to remove the anterior lobule, on account of its small size, sessile nature, and forward situation rendering it difficult to seize. The patient left greatly relieved so far as the breathing was concerned, but hoarseness still persisted, probably mainly on account of the complete paralysis of the vocal cord.

*Obscure Case of Laryngeal Disease, with certain Clinical Resemblances to Syphilis and Cancer; Death; Autopsy.*—A male, aged 50 years, applied on 6th September 1882 on account of hoarseness, constant pain in the throat, severe cough, and occasional bloody sputum. The illness dated back for about a year. He had syphilis twenty years previously, for which he was medicinally treated, and pleurisy one year ago. Had suffered from occasional sore throat. He neither smoked nor drank to excess. Family history unimportant. Morning temperature  $98^{\circ}5$ ; pulse 100. Slightly prolonged expiration at the right apex anteriorly, with some flattening of the corresponding region posteriorly, but no moist sounds. Lingual veins full; faucial secretion abundant; very tolerant of laryngoscopic examination. Red line on upper gums, adjoining incisor and canine teeth. The laryngeal aperture was deflected, and pointed towards the left side. The epiglottis was thickened, especially on the right side, but not scarred. The outline of the right arytenoid cartilage was lost, and two small red nodular masses sprang from it, the right ventricular band, and the right aryepiglottic fold. On account of the swelling, the right vocal cord was scarcely visible, and did not move during phonation. There was no ulceration. Externally there was noted slight enlargement of the right superior laryngeal gland, which, however, never exceeded a pea in size. The membranes of ears were normal.

*Pain* was the most prominent symptom throughout. It was present in the right ear from the very commencement of the illness, never in the left, with varying degrees of intensity, becoming

worse during deglutition. Shortly after coming under observation, it was markedly present under the right ramus of the jaw, where also tenderness on pressure was present. The pain in the ear and under the jaw was at times most acute. The *cough* was paroxysmal and distressing, and resulted in expectoration, which was frequently tinged with blood. There was a tendency to nasal regurgitation of fluids.

The treatment pursued was the administration of iodide of potassium in 10 and afterwards 20 gr. doses thrice daily, with insufflations of morphia to the interior of the larynx, and the external application over the seat of pain of a pigment of chloral and camphor. No improvement in the laryngeal appearances followed these, though the pain was greatly diminished after each sedative application. On the 12th December the dose of the iodide was raised to 30 grs., along with 1-24th gr. of the bichloride of mercury. By the 22nd the pain had greatly subsided, and deglutition was more easy. On laryngoscopic examination, the nodular swellings already referred to had undergone marked alteration; they now had a granular appearance, and appeared to have undergone partial absorption. On the 30th slight tremulous movement was detected in the right vocal cord, and absorption seemed to be still going on; pain was almost absent from the ear and under the jaw, but was now present in the roof of the mouth. He now felt stronger, and was able to swallow solid food. On 9th January 1883 the patient unfortunately caught a severe cold, accompanied by a partial return of the old symptoms, but not to the same extent as formerly. An attack of catarrhal pneumonia subsequently supervened, of which the patient, already much debilitated, died on the 26th January.

*Autopsy* showed completely adherent pleuræ on both sides, with small points of consolidation and softening scattered throughout the substance of the lungs, especially at the right apex. The right vocal cord was entirely destroyed, its arytenoid cartilage was necrosed and bare, and the internal wall of the right laryngeal sac was completely destroyed by ulceration. Throughout the larynx on the right side were found irregular thickening and ulceration, so that the condition might be aptly described as a mass of ulceration and thickening, gradually spreading from the right vocal cord as its base up to and implicating the lower right half of epiglottis. The other cartilages seemed unaffected. Microscopical examination of the diseased structures showed a simple fibro-cellular infiltration of their substance, but no specific histological element could be made out, though the preparation was examined by several accomplished microscopists.

*Remarks.*—This case indicates the difficulty occasionally met with in the differential diagnosis of syphilis, cancer, and simple chronic inflammation of the larynx. With a distinct history of syphilis, and a certain amount of amenability to antisymphilitic treatment, the case presented certain of the clinical features of



cancer, notably in the age of the patient, the nature of the pain, the intensity of the earache, and the hæmorrhages. Microscopical examination, on the other hand, pointed to nothing more than chronic inflammation. Taken altogether, the case undoubtedly had a well-marked syphilitic element in its nature, and emphasizes the remark of Morell Mackenzie, that "in no case should the patient be condemned as suffering from cancer (of the larynx) until all doubts have been cleared up by the trial of antisyphilitic treatment." It is worthy of note that the iodide of potassium alone failed to effect any improvement, but its combination with small doses of mercury was followed by diminution of pain and apparent partial absorption of the swelling.

*The Galvano-Cautery in the Treatment of Nasal Polypi and Hypertrophy of the Nasal Mucous Membrane.*—The advantages of the galvano-cautery over forceps or snare in the treatment of nasal polypi were exemplified in a case recently sent by Dr Chapman. The patient, about two years previously, had been operated on by the older methods, and the differences as regards bleeding and pain were described by him as being greatly in favour of the cautery. This method of treatment also appears to be more radical than the others. In a case of post-nasal catarrh, with hypertrophic thickening of the mucous membrane over the vomer, various local medicaments were experimented with, but without apparent permanent benefit. Great improvement followed the application of the galvano-cautery to the thickened mucous membrane. This seems to be the most satisfactory method of treatment in this very common and troublesome affection.

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## V.—TREPHINING AS A PREVENTATIVE AND CURATIVE MEASURE.

By J. A. MACDOUGALL, M.D., F.R.C.S., Carlisle.

(Read before the Border Counties Branch of the British Medical Association at Keswick, 6th July 1883.)

(Continued from page 243.)

APART from the benefit likely to attend the early use of the trephine as regards the immediate effects of an injury—the life or the death of the patient—there is another aspect in which we may view it favourably, the effect its employment is likely to have on his future well-being. More than once in the course of years cases have presented themselves to me where with the history of a head injury—a thing of long ago—there was such mental disquietude and unrest, it might be severe suffering, that when upon examination a depressed portion of bone was detected the question arose, Might not primary trephining have saved this man his present trouble? And that this questioning



has occurred to others I know, for in the *Lancet* for September of 1881 Dr MacEwen of Glasgow treats of this very matter, and here I borrow from him:—"In depressed fracture of the skull the practice at present carried out is not to interfere unless symptoms indicative of mischief arise, and surgeons believe themselves justified in maintaining this view from the very numerous cases of recovery which attend this practice. Though, under this treatment, many such cases make what seems to be an excellent recovery and are dismissed apparently cured, a number of them afterwards exhibit serious mental defects. In the course of surgical practice I have been struck by the number of persons who are found suffering from mental peculiarities or weaknesses following head injuries which had been treated passively. Some suffer from giddiness and temporary mental confusion when spoken to abruptly, or when they attempt any sudden movement. Others have loss of memory and power of sustained attention to such an extent as to unfit them for many occupations, while some are irascible at trifles, and become infuriated on taking small quantities of alcohol—quantities very much smaller than what they took daily, previous to the injury, without doing them apparent harm." Remark-  
ing on certain cases treated by non-interference, and which made good recoveries so far as the immediate injury was concerned, he goes on to say, "In two cases, at least, of compound depressed fracture of the skull which had made good recoveries, mental deficiencies began to present themselves at later dates. . . . One patient, within eighteen months after dismissal, returned to complain of giddiness and confusion when he attempted to do anything sudden. This caused him sometimes to fall. His parents stated that he appeared to pass into fits, and that these fits were confined to the right side of the body, the side opposite to the head injury." While he was under observation the fits were not observed, but the giddiness and confusion were clearly exhibited. In another case, where the depressed bone was not elevated, and where the patient apparently recovered, it is stated, "Within eight months after dismissal, though very acute and active in doing anything under his immediate observation, he was yet extremely forgetful; the names of many of the simplest objects with which he was familiar would escape his memory. He could handle and use them correctly, but he could not recall their names. Previous to the injury, it was said, he had a good memory." Observations such as these are of much value; and although it might be urged that, with the exception, may be, of the fits said to have occurred in the first case, they are symptoms common to most severe head injuries, still the periods at which they occurred—*long after the accidents*—tends, I believe, to associate them more or less directly with the presence of the depressed bone, and that the harm in such cases may take other and sadder form there is strong evidence. In the 113 cases which Mr Walsham has tabulated as late trephinings, I find there are no

fewer than 26 of traumatic epilepsy, apparently the direct result of the pressure of unelevated bone, the best evidence of this resting on the fact that 20 of them were cured by its removal. And classified with these there are many others where long-continued suffering and discomfort seemed to have been the result of a policy of non-interference. Nor is this all. In the *British Medical Journal* for March 1883 is a paper by a late resident in the Millbank Convict Prison, Dr Drew, drawing attention to the fact that cranial injuries seem to have a very direct relation with crimes of violence. This is not his observation only, for he remarks that "a very shrewd observer told me that after nearly thirty years' experience among prisoners of the most violent and dangerous type he was fully convinced that the cranial injuries received by prisoners did in some way influence their careers." In illustration and support of his belief Dr Drew notes three cases, in all of which the prisoners were guilty of violent crimes, and in all there existed a markedly depressed fracture of the skull; and it is noteworthy, as bearing upon the doctrine of cerebral localization, that in two out of the three in which the situation of the injury is referred to it existed over the frontal lobes. Such evidence, then, as I have presented to you—evidence for which I am largely indebted to the labours of others—seems, to my thinking, to lend strong support to the belief that the danger attending the operation of trephining is not so great as is generally imagined, and that when a patient recovers from a bad fracture of the skull without the operation, we are hardly justified in reckoning that he has been cured. If it be undertaken primarily, it tends to the removal not only of depressed bone, but, it may be, of splinters of bone lying loose or embedded in the brain or its membranes; it may lead to the removal of foreign bodies introduced at the time of the accident, while in certain cases it may enable us more readily to render an injury aseptic in such a situation, as asepticity is most to be sought for. Few structures become more readily inflamed than do the membranes of the brain. To delay trephining in the cases which a rather sad experience seems to teach are best met by it is fraught with the highest risk, and the futility of its application to the arrest of harm once established is but too frequently demonstrated. A great master in surgery has said that he looks upon a secondary amputation as a confession of either a mistake or a disappointment, and thus would I incline to regard many secondary trephinings. That very many cases do well without it every one must be convinced,<sup>1</sup> but the record of such cases, to prove their cure, would require to be well-nigh lifelong. And if to-day we have, as I have ventured to guess,

<sup>1</sup> On this point see a paper in Braithwaite's *Retrospect of Medicine* for 1876, vol. ii., by one of the ablest and most thoughtful of British surgeons, Mr Sampson Gamgee, a paper to which I am indebted for much of my knowledge of the history of trephining; also lecture xi. in his valuable work on the *Treatment of Wounds and Fractures*, second edition.



more unstable nervous systems than our forefathers, and a greater predisposition to nervous disease, then surely we must consider with the highest attention all the means which might happily forestall its development, and I make bold to assert that primary trephining is one of them. Consider how much antiseptics will aid us. The system that enables Professor Ferrier to operate with the confidence he does, and that admits of the successful treatment of spina bifida by the direct excision of the sac, lessens very materially the anxiety and the dread with which formerly we used the trephine. But Ferrier's experiments go far beyond the mere establishment of the safety with which we can open the skull, and lend in many ways the greatest aid to the surgeon. I have already referred to the fact that in the preservation of the integrity of the arachnoid cavity we had a great guarantee as regarded the probably successful issue of any given case. Ever and again, during the performance of the operation in cases of compression from effusion of blood or the products of inflammation, it is demanded of the operator that he should incise the dura mater, and this he has hitherto done with a very conscious feeling that he thereby added seriously to the risk of the patient. With Ferrier's experience, and under antiseptics, he need have no such thought; and more than this, in some cases of severe "enforcement" with bad laceration or bruising of cerebral substance, he may venture to carry out what, if memory serve me aright, the late Mr Callender clearly foreshadowed, the removal of such portions of brain as seem hopelessly destroyed. Nothing have I seen in this way more wonderful than the brains which Ferrier can show—brains in which whole tracts, nay, whole lobes, have been destroyed, and where, after life, lasting for many months, has at last reached a natural termination, post-mortem examination has demonstrated membranes non-adherent, convolutions unflattened, and a great wound in cerebral matter, the sides of which are firm and hard, without a trace of inflammatory softening in them. There can, in my reckoning, be no higher testimony to the success of antiseptic surgery than this affords, a success which Sédillot's recent experience in this very operation of trephining has most strongly emphasized.

Thus far we have dealt with the operation more in the light of a preventative proceeding; but what of it as a curative agent? Many cases are on record—some by the older surgeons—as to the benefit which has followed the use of the trephine in epilepsy connected with old injury of the head. Cases of insanity, too, have been cured by it, both conditions owing their origin and their persistence to the irritation induced in the cerebral meninges, it might be on the surface of the convolutions themselves, by depressed bone or spiculæ. And that as years pass a larger number of such cases will be subjected to the operation I fully believe, for here, as in the primary procedure, antiseptics must aid us vitally.



Eccheverria, who has devoted especial attention to the subject of traumatic epilepsy, records 145 cases with 28 deaths, a mortality of little over 17 per cent. Of the 117 recoveries, 93, or nearly 80 per cent., were cured of the epilepsy, 18 were improved, while 6 were unbenefited. In Mr Walsham's tables there are, as I have already told you, 26 cases noted, 20 of which were cured by the trephine. Professor Briggs has trephined 28 cases with only 1 death; but his results as regards the disease for which the operation was performed I am unable to give you.

Dr Russell of Birmingham, in an able and very interesting article "On Trephining for the Relief of Epileptiform Attacks occurring after Injury to the Head,"<sup>1</sup> notes 80 cases of traumatic epilepsy, 50 of which were trephined with 44 recoveries; and here is his summation:—"Of the 44 cases in which the patients recovered from the operation of trephining, in 5 little or no benefit resulted; 1 is even declared by Mr Travers to have been the worse for the operation. Satisfactory recoveries, as tested by a sufficiently protracted term of observation, especially stated, amount to 6. Progressive amendment had been going on through a considerable length of time in 3 others. Slight return of the disease had occurred in 2. In 18 cases cure of the disease is reported to have been effected, the terms 'complete,' 'perfect,' 'permanent' being also frequently applied, but no information is given as to the duration of the observation. Finally, in 10 cases, the period through which the patient was watched after the operation being stated, it is obviously too short to permit any conclusion to be drawn as to permanent results. In 2 cases only had the term of observation extended to three months; in all the others it had been much shorter." And how necessary such caution as Dr Russell observes in this last sentence is demanded, all surgeons who have had to operate on patients the subjects of epilepsy know. Upon two or three occasions it has happened to me to perform amputation on such patients, and in two at least of the number the fits remained in abeyance for some considerable time after. As days ran, however, they reappeared, and now that years have elapsed their condition is worse than of old.

In the *American Journal of Medical Science* for July 1861, Dr Billing tabulates 72 cases in which trephining was performed for the relief of epilepsy. Of these 16 proved fatal, 42 were cured, 4 were unbenefited, and the remainder were improved but were not entirely relieved.

Such records, then, are, I cannot but think, encouraging. The death-rate in some, as in Billing's table, is high; but the use of antiseptics will, I am sure, diminish this. And when we consider, what there is strong ground for belief is the truth, that the traumatic cases have a greater tendency to death than those of true epilepsy, and that the nervous derangement and the mental deterioration accompanying them is more frequent and

<sup>1</sup> *British Medical Journal*, 1865, vol. i. p. 585.

more pronounced, then interference seems not only more justifiable, but in many instances may be imperatively demanded. Here, in connexion with this very subject of operation, it is but right that I should draw attention to the fact that in a certain number of such cases the use of the trephine itself is not required. Free incision of the scalp, it may be of the periosteum also, is all that is needed. This, I fancy, where there has been the history of a blow or bruise without marked injury of bone, and the explanation, or rather, maybe, the anticipation, of such a result is to be found in the observation of Brown Sequard,<sup>1</sup> made long ago in connexion with epilepsy artificially induced, that if, in certain skin areas in which irritation applied excited convulsion, some change was brought about in the cutaneous coverings, either by incision, by issues, or the cautery, forthwith the recognised results disappeared. Further, that the observation throws a certain amount of light upon the undoubted success which attends the use of the circular blister in some epileptics with well-marked aura I would venture to guess. Here is such a case, brought under observation with a view to nerve-stretching:—A. H., a factory operative, æt. 47. Epileptic for many years; his average of fits four weekly, and the attacks so bad that latterly his employers would not allow him to follow his vocation on account of the risk to which his malady was constantly subjecting him. Had been treated by bromides, iodides, belladonna, etc., without benefit. His aura, a most distinct one, began in the middle and ring fingers of the right hand. Five months ago a circular blister was applied round the lower third of the right forearm. From then until now he has not had a single fit.

When, with a history of previous head injury and the presence of depressed bone, epileptiform attacks make their appearance, then we should, I believe, seriously consider the question of elevation. Marshall Hall, in vol. xxv. of *Medico-Chir. Trans.*, draws attention to the fact that sometimes every kind of irritation applied to the cerebrum fails to excite spasmodic action, such action, however, being at once induced by pinching or laceration of the dura mater; and Bochefontaine and Duret have shown that a certain proportion of the phenomena of irritation, such as convulsion and contraction, may be traced back to lesion of the nerves of the meninges, especially of the dura mater. It is thus easily understood how a depressed edge of bone pressing on the membranes, or a spicula embedded in their substance, may become the primary source of convulsive phenomena. The existing condition, too, is, unhappily for the patient, persistent, and so long as it remains the morbid conditions it gives rise to are not likely to undergo amendment. And, again, the changes which this excentric harm induces, either in the nutrition or in the excitability and tension (may be in all) of certain centres near to or functionally related to the corpus striatum, is in process of time probably rendered not only more

<sup>1</sup> *Researches on Epilepsy*, by Brown Sequard, Boston, 1857.



pronounced but more permanent, and therefore interference, to be of benefit, should not be too long delayed. But no hard or fast line can be drawn against operation even where the bone is not depressed. Cases are recorded where, with the history of injury unmarked externally by any inequality of the cranial surface, trephining has been followed by the best results, and the conditions discovered at the time of operation have been curiously various.

However much room there may be for doubt as to the growth of new disease, there can be none in this, that time, which leaves so little unchanged, carries revolution even in the practice of surgery. I have already told you how much, in the past, the teaching of a great French surgeon depreciated trephining, and now one of its warmest advocates is a Frenchman. The monograph of Dr Just Lucas Championnière, *Sur la trépanation guidée par les localisations cérébrales*,<sup>1</sup> is one of the most interesting and valuable that has appeared on the subject. He believes, and believes, I consider, with good reason, that the discovery of cerebral localization places the operation on a new and firmer footing; and so important a bearing has this upon the question I am discussing, that I hope you will allow me to say somewhat of it. Experimental physiology, disease, and traumatism have each borne a part in demonstrating beyond doubt the existence on the cerebral cortex in the fronto-parietal region of certain centres irritation of which induces convulsion, and destruction paralyses of muscular movements, on the opposite side of the body. Roughly speaking, these motor centres lie under the posterior half of the parietal bone. They are grouped around the fissure of Rolando, and are situated in the bases of the frontal, in the ascending frontal, in the ascending parietal and postero-parietal convolutions, and the parts they represent are thus localized:—The leg and the foot, at the top of the ascending parietal and a little behind it; of the arm and leg, at the summit of the ascending frontal and the base of the first frontal; extension of the hand and arm, at the foot of the first frontal; flexion of forearm and supination of hand, in the ascending frontal, at the base of the second frontal; elevation and lowering of the angle of the mouth, in the lower third of the ascending frontal; movements of the tongue, in the front of the third parietal; retraction of the angle of the mouth, in the inferior extremity of the ascending parietal; lateral movements of the head and eyes, with elevation of the eyelids and dilatation of the pupils, in the foot of the second frontal; movements of the hand and wrist, in the lower third of the ascending frontal.

Can such knowledge aid us practically as surgeons? This I answer unhesitatingly in the affirmative. There are two classes of cases in which the use of the trephine has been acknowledged by most to be the best treatment, but in which the difficulties of diag-

<sup>1</sup> *La trépanation guidée par les localisations cérébrales*, Dr Just Lucas Championnière, Paris, 1878





*After Férri*.—SF, Superior frontal convolution. MF, Middle frontal. IF, Inferior frontal.  
FR, Fissure of Rolando. APC, Ascending frontal convolution. APC, Ascending parietal.



nosis have often prevented its employment—cases of fracture of the internal plate and of cerebral abscess. Localization will, I believe, help us to the surer detection of both. To many who have seen much of head injuries the opportunity has occurred of observing with how very slight evidence of harm to the outer plate there may be serious comminution of the internal; and so deceptive, in such cases, have external appearances proved, that too often autopsy alone has revealed the amount and the true nature of the injury inflicted. Granted, then, such an injury with its sequences—irritation of the motor centres and convulsion or spasm, it may be *partial paralysis alternating with the localized movements* as its peripheral manifestations, the regions in which these occur, viewed in the light of our present knowledge, will guide us with fair certainty to the point at which the harm originates.

Championnière records a case bearing on this point, of which I give a brief outline. A man, picked up in the street insensible, was admitted into hospital, and ultimately came under his care. Examination of his head led to the discovery of a very slight and perfectly superficial scalp-wound situated over the left parietal eminence, and some ecchymoses round one eye. There existed an *incomplete paralysis of the right arm*, which after some days was complicated by the occurrence of more or less general convulsion. Such evidence of central, probably cortical, irritation led to exploration, the recognition of a comminuted fracture in the neighbourhood of the brachial centre, elevation of the fragments, and cure.

And we gather somewhat more from his teaching, which may, in a difficult case, aid us in our own decision. He notes that with irritation of the cerebral cortex there is generally a lowering of bodily temperature, and in some cases difficulty of swallowing; that Sédillot states that in fracture of the internal plate auscultation in the neighbourhood of the injury may lead to the detection of a “*bruit de frottement*,” and that Stromeyer and some American surgeons have convinced themselves that percussion applied in a similar situation may bring out a distinct “*bruit de pot fêlé*.”

Broca, in 1871, relying with confidence on his knowledge of the locality of the seat of speech, trephined a case of cerebral abscess in which aphasia was a marked symptom, and with this success, that he hit upon and evacuated the abscess, although the patient ultimately succumbed.

Some years later, guided in a similar case by the presence of epileptiform convulsions, he operated with perfect success; and I have knowledge of one case where, after an injury in the left parietal region, right-sided convulsions supervened, followed by aphasia, and in which abscess in or near the base of the third frontal convolution was diagnosed—a diagnosis which was verified by post-mortem examination. Had permission only been granted by the



friends of the patient, this case might, by operation, have had a successful issue.<sup>1</sup>

In operating on cases of cerebral abscess of traumatic origin, it is well to bear in mind the observation of M. Petres,<sup>2</sup> that the result of lesions in the centrum ovale in the fronto-parietal region are similar to those which follow lesion in the motor regions of the cortex, and it is thus possible to have hemiplegia dependent on pus formation as the result of injury, in which no evidence of harm may be visible in the meninges.<sup>3</sup> In such circumstances the use of an aspirator needle would solve what might otherwise prove a difficulty.

But a knowledge of localization will carry us further than the readier recognition of fracture and of abscess, where in both we have generally a point of injury to guide us. Cerebral tumour will, I hope, remain no longer the certainly fatal disease it is to-day—fatal in a certain number of cases simply through the mechanical effects it produces, and because from its situation it seems impossible to remove it. Ferrier, who has done so much to develop and elucidate this whole subject, draws attention, in his most able memoir *On the Localization of Cerebral Diseases*,<sup>4</sup> to certain characters of the paralysis which depends upon lesion of the cortex, to the mode of its invasion and extension, to the associations in which the paralyzes are commonly met with, to the entire absence in such cases of any interference with sensation in the paralyzed parts, and any quantitative or qualitative change in the electric contractility of the muscles or in their nutrition.

In a case, then, in which the paralyzes bear the especial character Ferrier assigns to them, in which, in addition, localized cerebral pain is either spontaneously complained of or elicited by percussion, in which difference of temperature seems to confirm the probable

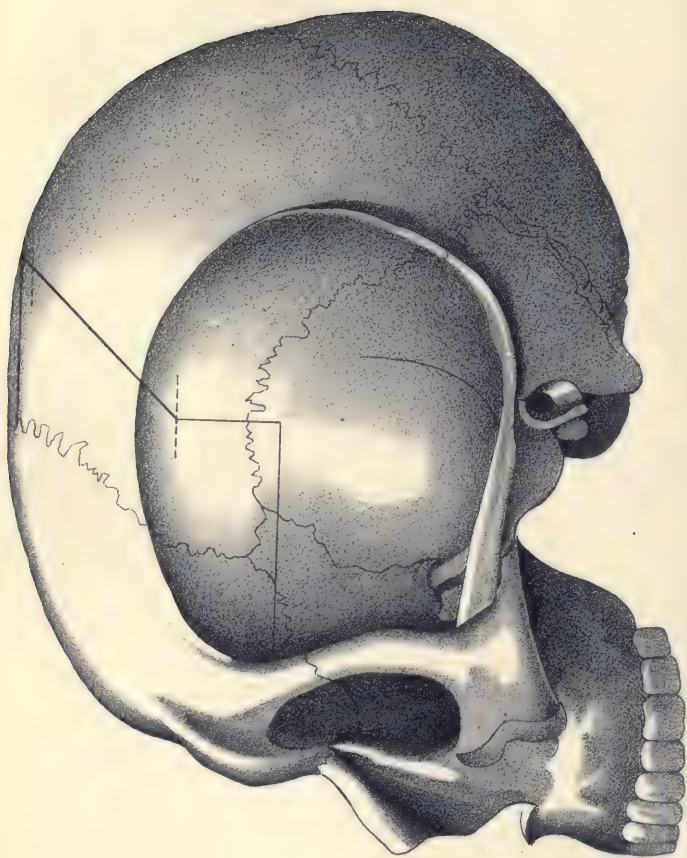
<sup>1</sup> Since this address was delivered, another case has come under my observation bearing on this point of cerebral localization. A patient of Dr Russell of Carlisle had for several years been the subject of otorrhœa. Ten days before the date on which I saw her she had been seized with intense headache and pain in the right ear, and when Dr Russell visited her there was so much tenderness over the mastoid process that he cut down upon it and evacuated pus. As days passed, however, she did not improve; drowsiness supervened, and with this came rigidity of the left upper arm (flexion of forearm), and more or less paralysis of the hand. There were, however, at no time any convulsive phenomena. Regarding the diagnosis, we believed that the girl was the subject of cerebral abscess, the result of disease of the middle ear, and that the situation of the abscess was in or near the base of the second and third frontal convolutions. We very strongly advised trephining, meaning to apply the instrument over the lower extremity of the fissure of Rolando. Unfortunately the friends objected, and it was unhappily only by post-mortem examination that our diagnosis was confirmed and the feasibility of our proposed treatment demonstrated.

<sup>2</sup> *Lesions du centre ovale*, Paris, 1877.

<sup>3</sup> Confirmatory of this, see case by Mr Hulke in *Medico-Chirurgical Transactions*, vol. lxii. p. 367.

<sup>4</sup> *The Localization of Cerebral Diseases*, Ferrier, 1878, pp. 95-99.





*After Championnière.*—Measurements to ascertain the situation of the Fissure of Rolando.



cortical origin, and other conditions lead to the belief that a tumour is the exciting cause of the morbid phenomena, operation might justly be considered. Difficulties there are, undoubtedly, in the way—one of the greatest the fact “that the area of anatomically demonstrated lesion is not necessarily co-extensive with the area of functional disturbance, and thus conclusions as to exact localization from a purely clinical point of view are rendered doubtful.”<sup>1</sup> But “la hardiesse est pardonnable en face d’une maladie dont la mort est la fin habituelle,” and so the patient should have the chance.<sup>2</sup>

True it is that the area in which the motor centres lie is a wide one; but it is wonderfully differentiated, and Ferrier’s experiments have confirmed what has hitherto been the belief of surgeons, that even with a very large opening in the skull—inflammation being prevented—there is no dread of a hernia cerebri. Confidence on this point would enable the operator to remove, in his search, a larger amount of bone than in other circumstances would be justifiable. But to carry out with any hope of success such a proceeding it is necessary that we should have some recognised rule by which, on the surface of the skull, we may localize the site of the fissure of Rolando—the line, we have already seen, around which the motor centres are grouped. To determine this we must first find the probable situation of its upper extremity, and in doing so it will strike us all how much further back it is than *a priori* we would have supposed.

The measurements of Féré and Broca have been examined and contrasted by Championnière, and his dictum is this:<sup>3</sup>—That the upper end of the fissure of Rolando is situated 2·2 inches (53 millimetres) behind the bregma. The position of the lower extremity is thus determined:—From the furthest back part of the external orbital process, at the point where it curves and rises up to join the crest of the temporal and frontal bone, draw a horizontal line of 2½ inches (7 centimetres); from its extreme end draw a perpendicular line of over 1 inch (3 centimetres). The upper extremity of this line brings us nearly, though not exactly, to the situation of the inferior extremity of the fissure of Rolando. Between these two points, passing rather obliquely forward, lies this central guiding line.

With this last observation I may fittingly close my address. Proof it is, if proof were needed, that if disease be on the march, medical science keeps pace with it. The doctrine of cerebral localization is one of the things that are new. A few years ago a former president told you ably and eloquently of the advances surgery had made in his time; and were he to repeat his story to-day, he would have no little to add to it.

<sup>1</sup> *The Localization of Cerebral Diseases*, p. 55.

<sup>2</sup> Dr Macewen of Glasgow has demonstrated the practicability of such a procedure, for he has operated with success upon two cases of cerebral tumour.

<sup>3</sup> *La trépanation guidée par les localisations cérébrales*, p. 107.

Recognising the probability of change in disease, and, of necessity, change more or less in our treatment of it, we may well cherish and remember the words of Bacon, and endeavour ever to have "eyes kept keen in vision and lanterns kept brightly burning;" and as one of the greatest of English orators remarked a short time ago, when alluding to a subject in which he had interest and had made especial inquiry, "Having got my eyes a little open with regard to this one question, they opened still more as men's eyes do when they see a light—they open more and more unto the perfect day," so I trust that when changed forms of disease meet us we may, by the light which Paget has first clearly and distinctly given us, open our eyes more and more to their truer and their readier recognition.

## VI—NOTES ON BADEN IN AARGAU.

By a VISITOR.

BADEN in Aargau is a spa which ranks exceptionally high in the opinion of its frequenters, but is one to which few English have as yet found their way. Dr Nelaton, after a careful examination of all the baths of Europe, is said to have pronounced those of Baden to be the first; and certainly the enthusiastic accounts by bathers of the benefit they and others have received go far to prove their curative qualities. In the last official report of the hospital for the poor, out of 173 cases of chronic rheumatism (the chief disease treated) only 2 are reported "unchanged," 91 are reported "cured," and 80 "improved."

Fricker, in his *Guide to Baden*, says, "The thermal waters of Baden rise with a temperature of 116 degrees Fahrenheit from a depth of more than 1000 metres. . . . On an average, all the springs collectively yield 205,000 gallons daily. . . . To every 1000 parts of water there are 4.1 component parts of various minerals, such as—

|                          |   |   |   |        |
|--------------------------|---|---|---|--------|
| Sulphate of potash,      | . | . | . | 0.1273 |
| Sulphate of soda,        | . | . | . | 1.8427 |
| Chloride of sodium,      | . | . | . | 0.3204 |
| Chloride of lithium,     | . | . | . | 0.0238 |
| Chloride of calcium,     | . | . | . | 1.3458 |
| Bicarbonate of magnesia, | . | . | . | 0.3541 |

The gaseous bubbles that continually rise from the water contain, to every 100 parts:—

|                        |   |   |   |        |
|------------------------|---|---|---|--------|
| Carbonic acid,         | . | . | . | 32.766 |
| Oxygen,                | . | . | . | 67.150 |
| Sulphuretted hydrogen, | . | . | . | 0.084  |

The use of the waters is beneficial in the following cases:—



In various chronic, rheumatic, and gouty affections, and in the after-effects resulting from this class of disease; in cases of metallic poisoning; in those maladies of the mucous membranes, the respiratory, digestive, and urinary organs, which are the effects of rheumatism and gout, or are to be attributed to the abuse of alcoholic stimulants; in asthma and croup; and, finally, in the conditions which result from broken limbs, dislocations, bruises, and inflammations of the chest and stomach, caused by injuries or colds."

The usual "cure," as it is called, consists of twenty-one baths, taken one daily between 5 and 8 A.M., at about 28° Reaumur, and gradually lengthened from a quarter to a half or three-quarters of an hour. This is accompanied by douche or shampooing if ordered, and in some cases a small quantity of the water is ordered to be taken internally. After the bath, the patient returns to bed for an hour, and may then take a light breakfast. This in general ends the day's requirements, unless in cases of throat or mucous affections, when gargling and inhalation are also prescribed. After about ten baths the patient is expected to feel considerable lassitude, a proof that they are taking effect; after this the improvement should begin, but it is not usually fully experienced until a few weeks later. During the "cure" the patient is expected to avoid fatigue, damp, and draughts; and expeditions are discouraged. At the end of it he is usually sent to a moderately bracing place, and is expected to lead a lazy life for two or three weeks, at the end of which he becomes once more his own master.

My father was advised by Dr Joseph Bell to try Baden for chronic rheumatism. We accordingly went there in June. He was fortunate in being put under the care of Dr Wagner, an English-speaking bath physician, who impressed us and others as very skilful in adapting his treatment to his patients' condition and needs. He at once said that of course, at my father's age (80), chronic rheumatism of long standing could not be cured, but that the pain should be relieved, if not removed, and his stiff limb should feel generally stronger and easier. The result fully justified his predictions. My father had 28 baths, the douche with the second 14, and a few supplementary douches. At the end of the course the pain was greatly relieved; he could walk farther and with greater ease than before, and could even dispense occasionally with his sticks. Dr Wagner advised us to go to Engelberg for a few weeks until it became too hot to remain there, and to return to Baden for ten days or a fortnight in September, to confirm the improvement. Unfortunately, unseasonable cold drove us from Engelberg, and other circumstances have prevented our return to Baden; my father has therefore been unable to do full justice to the treatment.

Besides the baths, its picturesque situation, its nearness to Zurich, its many charming walks and drives, Baden has certain



attractions which make it a suitable residence for invalids. First, there is a copious supply of water throughout the town, and one receives an impression of general cleanliness and good drainage. Then, although, like other thermal spring resorts, the climate of Baden is undoubtedly warm, the barometrical observations show that it is not subject to violent changes, and the rush of the rapid Limmat brings a breeze which produces a certain amount of coolness. Last, not least, the hotel we were in, the Neue Kuranstalt, is exceptionally comfortable. Excellent food, good ventilation, double doors, stone staircase, large verandahs, a lift, electric light, etc., with the unwearied care, attention, and kindness of Monsieur and Madame Saft (the manager and his wife), combine to make it a most attractive home *pro tem*.

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## Part Second.

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### REVIEWS.

*A Treatise on the Theory and Practice of Medicine.* By JOHN SYER BRISTOWE, M.D. Lond., F.R.S., etc. 4th Edition. London: Smith, Elder, & Co.: 1882.

*A Handbook of the Theory and Practice of Medicine.* By FREDERICK T. ROBERTS, M.D., B.Sc., F.R.C.P., etc. 5th Edition. London: H. K. Lewis: 1883.

*A Dictionary of Medicine by Various Writers.* Edited by RICHARD QUAIN, M.D., F.R.S. London: Longmans, Green, & Co.: 1882.

*Wood's Household Practice of Medicine, Hygiene, and Surgery.* Edited by FREDERICK A. CASTLE, M.D. 2 Vols. London: Sampson Low, Marston, Searle, & Rivington: 1881.

THE large number of those studying medicine nowadays, comprising in Edinburgh alone a population of a couple of thousand, necessitates the reappearance of our best text-books in medicine at comparatively short intervals. Sincerely glad that our students should have such able works to choose from, it seems almost invidious to say anything in regard to the two first works on our list than that they are published and to be had through any bookseller. Both of these volumes have stood the test of time and of more than one generation of students, and both seem as great favourites as ever. Bristowe is a little larger than Roberts, to the extent of some 240 pages, 50 of these being devoted to a fuller elucidation of the physiological problems upon which pathology is based. The former is more philosophic and comprehensive; the latter is more

concise and dogmatic. Both are equally good : it is for the student to say which he prefers.

As between the two first works on the list there is a great degree of similarity, so there is also between the two last. True, they have been written each for a different class of readers, and the one savours more strongly of the popular than the other. Both are, however, incomplete treatises on the science and art of medicine, and aim at giving concisely more or less full information on certain specific subjects only. There is, however, this very decided difference between the two works, that while there is a great deal of Quain in the one, it is impossible to find Wood anywhere in the other except on the title-page. Perhaps, if we knew Wood's opinions as well as we do those of Quain, we might trace him out : as it is we fail to do so, or to see why his name should be even on the title-page, as it passes for a new work, is not said to be a new edition, and is not published by "Wood." Nevertheless, for a household work of reference—and it aims no higher—*The Household Practice of Medicine* is wonderfully full and complete, and is perhaps the best work of its kind, barring its size. It not only gives good advice as to the treatment of disease in any emergency, but it is very full in its directions for the prevention of disease by the exercise of both personal and domestic hygiene, and in this respect it is more complete and more worthy of attention than any other work of its kind. Its bulk, however, will certainly militate against its availability in those far-off huts and shanties where works of this character are even more useful than in more civilized domiciles, where medical advice of a more reliable character is readily obtained. Quain's work, notwithstanding its more pretentious character, conveys the idea of being laid down on somewhat similar lines. Some of the articles, indeed, are not up to the level of many of those in the *Household Practice*. Fancy the whole subject of the microscope in medicine discussed and dismissed in five pages with one of illustrations. Such a treatise would not suffice to prepare a student for his examinations, and is wholly insufficient for the needs of a practitioner. This and a number of other subjects treated of in the same perfunctory manner would be much better omitted from any subsequent edition, every care being taken to make the work a full and complete dictionary of medicine, and not a mere medical dictionary in which a little of everything may or may not be found. Among Dr Quain's collaborators are many whose names are among those best known in medical science. It cannot but be, therefore, that within the compass of its 1800 pages we have many treatises which, though concise, are of very considerable merit, and it is with pleasure that we bear testimony to this being the case. Nevertheless it is a disappointing work, which wants the fulness and completeness of its older rival Copland. In its present state it is not indispensable to any one's library, and it will require both pruning and expansion to make it a necessity for the practi-



tioner of the day, who can find enough about *Metastasis* in any ordinary dictionary, but who desires to know something more about *Bacilli* than that they have been found "in splenic fever and malignant pustule," without turning to a supplement not even referred to in the text, and which only too readily escapes notice.

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*A Treatise on Diseases of the Liver, with and without Jaundice.* By GEORGE HARLEY, M.D., F.R.S. London: J. & A. Churchill: 1883.

DR HARLEY is well known as an able man of extreme views, a careful observer, and an excellent chemist, but not quite so sound in his reasoning as he might be. This work is Harley all over, from the prelude, where he apologizes for not having printed it according to "the first stage of his Progressive Scheme of National Spelling Reform" (every word beginning with a capital), through the introduction, where he abuses pharmacists for calling themselves chemists, into the body of the work, where he adheres to the idea of jaundice by suppression as tenaciously as he did twenty years ago. True, the statement that the liver of frogs had been extirpated by Moleschott and others, without any trace of jaundice being detectable even weeks subsequently, can now be capped with the statement of Leyden, that he has tied the common duct in frogs and found no trace of jaundice in the liver fourteen days subsequently. But Leyden does not say either that he examined the blood or urine or that he fed the animals—all matters of importance in attempting to settle the point whether bile is secreted by the liver, and not merely separated. Leyden's experiment, therefore, proves nothing certainly but the slow nature of the vital processes in animals of so low a type as the frog, and the ancient theory of jaundice from absorption still remains the only one to which universal assent may be demanded. Most observers are content to believe, with Murchison and others, that while jaundice depends on absorption alone, absorption, or at least the jaundice resulting from it, may be brought about in three distinct ways—first, by occlusion of the duct or ducts in any part of their course; second, by abnormal diffusion due to altered blood-pressure within the liver; and third, by diminished consumption of bile within the blood, the ducts being perfectly patent in the two latter instances. Dr Harley believes in two causes of jaundice—first, obstruction and reabsorption of bile when the ducts are absent or occluded from any cause whatever; and second, suppression of secretion, or rather of the separation, of the bile, which he believes to be formed in the blood and only filtered out by the liver, and this not only includes all other forms of jaundice, but of necessity includes as a cause of jaundice such a disease as cirrhosis, in which



the secreting substance is destroyed. But we know that though all cirrhotic patients have the tawny hue of anæmia, they are only rarely jaundiced; and when they are jaundiced, we are quite safe to predict not only that some of the secreting substance still remains, but also that this secreting substance is connected with one or more occluded ducts. Dr Harley tell us that the bile secreted during twenty-four hours amounts to one-fiftieth of the weight of the body, about two or three pounds per day. But he ridicules the notion that anything beyond the most trifling quantity is reabsorbed: it is all, he says, simply voided as useless material along with the fæces. We have yet to learn that the fæces in their entirety usually amount to so much as two or three pounds per day; and if the entire solid waste of the body amounts to less than the weight of the bile secreted, and this bile is not reabsorbed, what becomes of it? Harley might get out of the difficulty by saying that the water was reabsorbed and the solid part voided with the fæces, but he does not do so: he acknowledges that some bile—"a mere bagatelle"—is reabsorbed, and can be detected, even in health, in the blood serum. But we do not know how much "some" may be; nay, we do know that in certain animals "some" means almost, if not altogether, all that is secreted. And however small the amount may be, we also know that any interference with its destruction in the blood would in time cause it so to accumulate as to produce jaundice. This is exactly what we believe to happen. Even on Harley's own showing, therefore, imperfect destruction of the bile in the blood may be a cause of jaundice.

Apart, however, from Harley's peculiar views, this work is a most excellent and thoroughly practical work. It is largely a clinical work, containing a number of instructive cases, and is written with a most enviable freshness and vigour. It is not a learned work, in the sense of containing a reference to everything that has been written on the subject; but as a guide to the practitioner in making a diagnosis and formulating a rational prognosis and treatment it will compare favourably with any work on the same subject which has ever appeared,—a strong statement, no doubt, but one which will be fully endorsed by every one who has had the pleasure of reading the book.

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*A Treatise on the Diagnosis and Treatment of the Diseases of the Chest. Part I. Diseases of the Lung and Windpipe.* By WILLIAM STOKES, M.D., &c. London: The New Sydenham Society: 1882.

THIS is one of those admirable reprints of standard works which the New Sydenham Society occasionally gives to its subscribers. And rightly so, for no one can understand the present position of

medicine as a science who is unacquainted with its past scientific history ; and no one can make so good a use of medicine as an art as he who not only knows its most modern phase, but is also thoroughly acquainted with its development and past analogues. Our experience is that all the erroneous and one-sided views which have so often done injury to the scientific fame of medicine have arisen from the egoism of its professors, who have rushed through the streets calling "Eureka," and fancying themselves descendants of Archimedes, when they were only geese cackling among the stubble, without even a barley pickle to justify it. Stokes was a great man and a great physician: he was one of the first to appreciate the importance of the stethoscope in physical diagnosis ; and while he was but a student at Edinburgh and not yet twenty-one, he published a work on the stethoscope, for which he received the large sum for those days of £70. The present work was first published after he had been in practice and taught and lectured for twelve years, and produced a most profound impression on the young and vigorous minds of the day. The present edition contains a most interesting memoir of Dr Stokes from the pen of Dr Acland of Oxford, giving a charming picture of the hard-working and hard-thinking physician, as well as of the poetic, kindly, and most lovable man, who was above all things an Irishman, and who thought nothing in the history of Ireland too trifling to be noticed or too unimportant to be loved. This work has been edited by Dr Stokes's distinguished compatriot Dr Hudson, who fell himself and passed to the majority while preparing this monument to his friend. It has received from its editor some few alterations, comprising a few omissions or corrections, and a few additions and interpolations from the pen of Dr Stokes himself, and left by him either as published essays embodying his riper experience, or as transcripts of this work prepared by himself with a view to its re-issue, and it may be regarded as representing the views prevalent among the best men in the Irish school of medicine at a most important period of the history of auscultation. In conclusion, we would fain say a word in favour of the New Sydenham Society, which for nearly a quarter of a century has been providing the practitioners of the day with a series of some of the best works in modern medicine, as well as a carefully chosen selection from representative works of a more historical character, for a most moderate subscription. Some of the works are now worth all the money paid. We commend the Society to our fellow-practitioners.

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*Medical Diagnosis: a Manual of Clinical Methods.* By J. GRAHAM BROWN, M.D. Edinburgh: Bell & Bradfute: 1882.

THE author of this work deserves great credit for his most



praiseworthy attempt to bring together in one compact volume all the modern methods of investigating morbid conditions. A glance over the contents is sufficient to show the pains he has taken, especially with some of those subjects which he discusses, while it also shows that there are others which he has treated with scant justice, and a few which he has entirely ignored. Not to be hypercritical, we shall only point out that though electric currents are pointed out as the most approved means of testing the condition of the muscles and the cutaneous sensibility, no mention is made of an electrometer; yet without that instrument not even an approach can be made to that precision which is so indispensable in every inquiry of the kind. Neither do we find any attempt to explain the construction and use of the ophthalmoscope, nor even the meanings of the words "direct" and "indirect," which, used in this connexion, are about as puzzling to a neophyte as anything in physics. We think it would have been better to have said something upon these, as well as on some other points, in a work like this, and rather to have omitted the examination of the female reproductive organs, as also the examination of the urinary system, subjects which are much more fully treated of in other works which are absolutely indispensable to every student. In a succeeding edition, which is sure to be called for, these omissions will doubtless be rectified, and a fuller detail and a larger use of explanatory diagrams will make this work even more acceptable and useful to the student in the future than it has already proved to be.

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*Enteric Fever: its Prevalence and Modifications; Ætiology; Pathology and Treatment.* By FRANCIS H. WELCH, F.R.C.S., &c. London: H. K. Lewis: 1883.

THIS work is a modification of the essay which gained the Alexander prize in December 1881. It is an attempt to show the relation of the enteric fever of England to that in the world at large; and it is all the more important because the observations have been made and the deductions drawn from soldiers, a class of men whose conditions of life and previous history are always more accurately known than among civilians. The study of disease as modified by habits and climate is supplementary to its historical study, and serves to correct some of those errors which history and local observation alone have rather helped to intensify than to remove. In the face of the careful way in which enteric fever has been tracked all over the globe by Mr Welch, and shown always to originate itself and not any other fever, he would be indeed a bold man who would still hold to the notion of the essential unity of all forms of fever, which Alison, and especially Stokes, held to the very last. An enthusiastic disciple is always in advance of his teacher,



and Stokes held that even rheumatic fever was but an evolution of the same essential poison which in other circumstances gives rise to typhus and enteric fever. Welch's book is more suggestive than exhaustive, and is a work to be studied by every one who desires to understand the relations of so important a disease as this, which annually incapacitates 140,000 in England alone, of whom 20,000 die.

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*Nerve-Vibration and Excitation as Agents in the Treatment of Functional Disorder and Organic Disease.* By J. MORTIMER GRANVILLE, M.D., etc. London: J. & A. Churchill: 1883.

DR GRANVILLE does not affirm that nerve force is the product of nerve-vibration, but he thinks there is reasonable scientific foundation for the idea that nerve action is accompanied by vibrations of the essential elements of the nervous tissue; and this being so, he considers that from the "light thrown on Newton's doctrine of concords and discords by Grove's generalization as to the correlation of forces, and more recently by Tyndall's experiments with sensitive flames and musical burners," there is reason to believe that pain may be removed, and other remarkable effects produced, by mechanically induced discordant vibrations being superimposed upon a set of morbid—inordinate or disorderly—vibrations, which are thus extinguished. Nerve-percussion is an entirely novel method of treatment, of which as yet we know scarce anything. It has some activity, because we can produce dilatation of the pupils or movement of the bowels, physiological acts, of which the former, at least, can scarcely be regarded as under the influence of the higher centres, to which, like mesmerism and the metallic tractors, nerve-percussion undoubtedly appeals. But centripetal vibrations may also reach the lower nerve centres, and thus not only remove pain by extinguishing those vibrations of the sensitive nerves which necessarily accompany its manifestation, but also reflexly modify nutrition, and thus initiate remedial changes in a more natural and less perturbative manner than happens when the electrolytic action of galvanic currents is resorted to. We are quite prepared, therefore, to hear that improvement has been found to follow nerve-percussion even in chronic lesions where electricity had already failed. Moreover, nerve-percussion is a useful means of diagnosis. By means of reflex action we can single out and trace up to the cord diseased nerves, without any risk of mistake such as is involved in the radiation of the electric current. We think that Dr Granville has done wisely in appealing to the profession to assist him in assigning its true value to nerve-percussion, because it is chiefly by experimental investigation and by physiological results that we can with any certainty determine the real significance of that relief to symptoms and apparent improvement in chronic affections which so frequently follow the use of the nerve-percutor.

*Hahnemann, the Founder of Scientific Therapeutics.* By R. E. DUDGEON, M.D. London: E. Gould & Son: 1882. Pp. 112.

THIS is called on the title-page "the third Hahnemannian lecture, 1882." What this actually means does not appear. At p. 16 it is stated in a note that it was "delivered to an audience *presumably* consisting of medical persons and students," but that it was intended for "distribution among the governors of the school, who are not all medical men, nor yet all men, but the reverse." This booklet is an *ad captandum* treatise, chiefly adapted for "the reverse." It claims that "Hahnemann's is the one name in the whole history of medicine connected with a rational, simple, and efficacious system of therapeutics based on the solid foundation of impregnable facts." But Dr Dudgeon ought to know that, so far as homœopathy has any scientific foundation at all, it is founded upon facts and on a doctrine more or less known and acknowledged by all the pre-Hippocratic philosophers. Hippocrates himself distinctly recognises the existence and importance of the dogma *similia similibus curantur* in several of his aphorisms (lib. v. aph. xvii., xxi., xxiii., and xxiv., etc.), and this doctrine has never been lost sight of in the history of medicine, though it was reserved for Hahnemann to base upon it, to the exclusion of all other principles, a system of medicine which he declared to be the only true method of curing disease. Hahnemann was not, therefore, the earliest discoverer of homœopathy; he was only the first to adopt it exclusively as the only scientific basis for what he supposed to be a rational system of therapeutics. If this assumption were true, it would indeed be honour enough to have been the first to recognise its truth, and we would gladly place Hahnemann upon a pedestal high enough to satisfy even Dr Dudgeon. But, as Dr Dudgeon knows full well, the "impregnable fact" upon which Hahnemann founded the exclusive title of this ancient dogma to the character of the only true basis of rational therapeutics was the observation of what he and his followers have vaguely termed "an ague excited by cinchona." Charms and incantations, spiders' webs, and spiders themselves, "hung round the neck in a nutshell," have all been known to cure ague, and so have Hahnemann's infinitesimals. Unfortunately, however, for a system of therapeutics which claims to be infallible, even cinchona agues—that is, agues which proved to be curable by cinchona or quinine, and for which, therefore, these drugs ought to have been the true homœopathic remedy—have only too often resisted the treatment by infinitesimals. So much has this been the case, that, not to quote others, Grosse altogether excludes quinine from the homœopathic treatment of ague, and says that in this disease only antipsorics seemed to him of any avail. Of course the reply to this is, that if a drug be homœopathic to any disease, it ought to be given in such quantities as suffice to cure. That is just what we so-called allopaths both say and do; but what

becomes of Hahnemann's claims to be the founder of scientific therapeutics? The homœopathic law is a pre-Hippocratic doctrine; infinitesimals are no longer trusted to—what is there of Hahnemann left? We think Dr Dudgeon has done well to bring the claims of that great “doppel-kopf,” not before men of science, but only before those whom he politely calls “the reverse,” whatever that may mean.

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*The Lettsomian Lectures on the Treatment of Some of the Forms of Valvular Disease of the Heart.* By A. ERNEST SANSOM, M.D. Lond., &c. London: J. & A. Churchill: 1883.

THOSE who are acquainted with Dr Sansom's lectures on the physical diagnosis of diseases of the heart know well that he is both an able and a careful observer, and will gladly welcome this little work on the treatment of those diseases. There are but three lectures—one on the rational bases of treatment, the pathogenesis of endocarditis, and its prevention; another on the various causes of mitral regurgitation and its treatment; and a third upon mitral stenosis and its treatment. In all these lectures we find great accuracy of observation, with careful reasoning. It is obvious that where Sansom speaks for himself we may rely upon him, though we may sometimes long for the time when a greater experience will widen and somewhat alter his views. We trust to get a similar careful treatment of aortic valve disease next year, and have every reason to expect that it will, if possible, be even more instructive and interesting than the present volume.

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*Materia Medica: a Manual for the Use of Students.* By ISAMBARD OWEN, M.D., Lecturer on Materia Medica and Therapeutics to St George's Hospital. London: J. & A. Churchill: 1883.

THIS manual is “intended to aid students by placing the outlines of the subject before them in such a manner that they may be clearly grasped and readily committed to memory.” The intention of the author was a good one, and he has succeeded in the work now before us. It is a volume of 191 pages, and will undoubtedly be of great service to students preparing for their examinations. The volume is devoted exclusively to materia medica as distinct from therapeutics; and when the day comes, as it ought to come at no distant date, when materia medica is taught separately from therapeutics, it will be even more highly valued by students. The preparations of the drugs are stated briefly, but, at the same time, in such a way as to convey to the mind of the student a correct idea of the processes by which they are obtained.



The book is not without defects, as where Dr Owen speaks of *æther* being only used as a vehicle. We have much pleasure in recommending it to the favourable consideration of students.

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*The Dispensatory of the United States of America.* By Dr GEO. B. WOOD and Dr FRANKLIN BACHE. Fifteenth edition, rearranged, thoroughly revised, and largely rewritten, with illustrations, by H. C. WOOD, M.D., Professor of Materia Medica and Therapeutics, etc., in the University of Pennsylvania; JOSEPH P. REMINGTON, Ph.G., Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy; and SAMUEL P. SADDLER, Ph.D., F.C.S., Professor of Chemistry in the Philadelphia College of Pharmacy, and of General and Organic Chemistry in the University of Pennsylvania. Philadelphia: J. B. Lippincott & Co. London: J. B. Lippincott & Co: 1883.

It is now half a century since the first edition of this work was published, and during these fifty years immense progress has been made in therapeutics, necessitating from time to time new editions of Pharmacopœias, and also of works expounding them. The present volume is at once a work of great erudition and a vast repository of learning bearing on materia medica and therapeutics. It is not too much to say that the learned editors have done their duty well. The work contains notices of all the important new drugs which are so much used in the present day, for many of which we are indebted to our transatlantic brethren. As a work of reference, it has few equals and no superiors in our language, and it does great credit to American pharmacy and therapeutics. The work deserves an extensive sale.

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## Part Third.

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### MEETINGS OF SOCIETIES.

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#### OBSTETRICAL SOCIETY OF EDINBURGH.

##### SESSION XLII.—MEETING X.

*Wednesday, 11th July 1883.*—Professor SIMPSON, *President, in the Chair.*

I. *Dr Halliday Croom* showed a FŒTUS which he had delivered by basilysis. When called to the case he found the cord prolapsed and pulseless; child, full time and large, presenting with the head; pelvis with a conjugate of  $2\frac{1}{4}$  inches, and the waters all escaped. As there was not room to turn, there was nothing to be done except basilysis. The basilyst perforated the basi-occiput, and so reduced the head that it could pass easily. To extract it the cranioclast was applied, but as it slipped the head was drawn through with a

crotchet aided by suprapubic pressure. When he used the basilyst on a former occasion, he thought that there was difficulty in making sure what part of the base the instrument was entering; this case showed him that it was not essential to know this.

II. *The President* showed the latest MODEL of the BASILYST. It differs from that which he had previously shown in having the perforating extremity split to the point. He tried to get the in-



Latest Model of the Basilyst.

strument so constructed at the first, and had only got the instrument-maker so to make it now by suggesting to him to put a double thread on the screw—one thread terminating at each point. This has the double advantage of letting the basilyst bite more easily, so as to facilitate the screwing of it into the bones, and of tearing up the perforated structures more completely by the wider separation of its extremities. He had been prompted to make this change recently in consequence of a communication he had had from Dr Brewis, house surgeon to the Glasgow Maternity, who wrote him that Dr Muir had used the instrument with success in a case of contracted pelvis.<sup>1</sup> The basilyzing of the head had rendered its extraction unusually easy, and it had occurred both to Dr Muir and Dr Brewis that the procedure would be facilitated by having the perforating part of the instrument split to the point, as it would then be possible to tear up the bones without necessarily screwing in the basilyst up to the shoulder.

He (Professor Simpson) begged the Society to allow him to take the opportunity of adding, that on a recent visit to Paris he found M. Auvard engaged in an interesting experimental investigation into the various methods of head-comminution. These investigations were being carried out in the Paris Maternité in a very scientific manner, and would doubtless yield important practical results. M. Auvard had the bronze collapsing pelvis of Professor Tarnier to work upon, which enables one to produce an outline of a pelvis of all varying degrees of narrowness. He (Professor Simpson) had the pleasure of seeing M. Auvard basilyze a foetus, and with the fingers easily press the head through a pelvis which had allowed of the crushing and extracting with the cephalotribe only with some difficulty. When a pelvis was used too narrow to allow even of the introduction of the cephalotribe, it had been found possible to perforate and dissolve the base with two strokes of the basilyst sufficiently to allow of the pushing of the head through the canal with the fingers.

<sup>1</sup> The case has since been recorded by Dr Brewis in the *British Medical Journal* for July 1883.



The basilyst, it should further be remembered, was as cheap, as efficient, and as easily manipulated as any other perforator that could be employed for making the preliminary opening in the vault of the cranium. Various cases had now proved that it could then be used to dissolve the base so as to allow the operator to extract the head more easily than after any other variety of comminution. He (Prof. S.) believed that where the parturient powers were still vigorous it would be possible so completely to basilyze the cranial bones that extractive efforts would become superfluous, and the birth would be effected by the unaided expulsive powers of the uterus and abdominal muscles. Basilysis was freed from the elements of danger which adhere to the application of cephalotribes or forceps of any kind carried up outside the head of the child into the uterine cavity. The basilyst, having struck the part of the head exposed at the os uteri, entered there, and did the rest of its work inside the foetal skull, without in any way touching, far less tearing or endangering, maternal structures.

III. *The President* also showed a FIBROID TUMOUR, which he had received from Dr Henry Barnes of Carlisle, with the following descriptive note:—The patient is a lady, æt. 38 years, married 14 years 9 months. During that period there has been one miscarriage and nine children born at full time. An interval of three years has elapsed between the child born to-day and the last one, during which period patient has enjoyed good health. About eighteen months ago she consulted me for rather profuse menstruation, but it yielded without having recourse to any local treatment. For six months before this last pregnancy she was perfectly regular, and the amount normal in quantity. Labour set in last night about midnight. The child was born at 5.30 this morning. Immediately after birth, on examining the uterus, I found that it was larger than it ought to be, so much so that I thought there must be another child. As the placenta did not come away in half an hour, I made an examination, and found the uterus firmly contracted upon the placenta and the fibroid. The latter was adherent on the right side, not far from the os. It was readily removed, and weighs 7 oz. The placenta was also somewhat adherent. There was no hæmorrhage after its removal of any moment, and the patient is doing well. Ergot was given immediately after the birth of the child. These are the points to which I may draw attention as of special interest:—1. The size of the tumour. 2. The absence of symptoms. 3. The rapidity of growth. It can hardly have been present before conception without giving rise to some symptoms. If the menorrhagia present six months before conception was due to it, it is remarkable that it should have disappeared. 4. Its non-interference with the progress of the second stage of labour. This is probably due to its position. The presentation was left occipito-posterior, and the tumour was on the right side, a short distance



from the internal os, and nearer the posterior part of the uterine cavity. It would thus be out of the way of the child's body. 5. It blocked the third stage. The placenta was behind it, and the uterus contracting upon it, I could not get it away until I had removed the tumour.

IV. A paper on STATISTICS OF TWO HUNDRED AND FIFTY CONSECUTIVE MIDWIFERY CASES IN PRIVATE PRACTICE, by Dr A. S. Currie of Lydney, was read, which will appear in a future number of this Journal.

*The President* said the Society was indebted to Dr Currie for this interesting contribution to the statistics of private practice, and hoped that other Fellows would be induced to follow his example.

V. *The President* read his communication on AXIS-TRACTION FORCEPS, which appears at page 289 of this Journal.

*Dr Angus Macdonald* said that, in common with the rest of the Members of the Society, he had listened with great interest to this paper. He had not had a large experience of this instrument, because he had not yet realized the force of the principle laid down that axis-traction was required in all cases. He used the usual forceps in ordinary cases, but axis-traction in the more difficult. In three cases he had found them of service. The first case was at the time when Tarnier's instrument was coming into vogue. The patient had hitherto been always delivered by craniotomy. He used Tarnier's forceps, and got a living child. The second case was in the Maternity Hospital. Having failed to deliver with the ordinary forceps, he used Tarnier's and succeeded. The third case was a large child, weighing 10 lbs. 2 oz. He tried the ordinary forceps, but could not make the head budge, and so sent for Simpson's axis-traction forceps—the first model. He found some difficulty in locking the plate, which would perhaps be overcome by practice. It held well, although he was pulling with considerable force. As soon as the child was born it breathed. The head lay transversely, and the forceps' grip was therefore antero-posterior, but no harm was done to the head. If this case had occurred before the days of axis-traction, he never could have brought the child living into the world. He thought that the principle of axis-traction was a correct one. The proposal made by Albert Smith to substitute pressure with the hand for axis-traction was preposterous. Professor A. R. Simpson's forceps were the best model of axis-traction forceps he had seen, and were calculated to do good work in the future. He thought it would be an advantage to have the traction-rods removable. With regard to the objection made to the fixation screw, he thought the child's head would be as safe with the forceps compressed with the screw as with the hand.

*Dr Halliday Croom* had thought at first, with Dr Angus Macdonald, that the cases requiring axis-traction were not frequent, e.g., when the head was at the brim and there was great difficulty in extracting. He had had a case similar to Dr Macdonald's, of a

flat pelvis with the waters escaped and the head fixed, so that he could not turn. In this case he used axis-traction successfully. More recently, however, he had begun to use these forceps in other cases as well, and was now so convinced of their utility that he not only always used them himself, but taught his students to do the same. Their utility with the head at the brim was beyond doubt; but in every case they lessened the risk of lacerating the vagina and perineum. At first he had difficulty in adjusting the lock, but this disappeared with practice.

*Dr Berry Hart* said that since these forceps had been introduced he had used no other. They were useful in two cases: (1.) In the justo-minor pelvis, through which a fœtus might be drawn with these forceps which formerly could only be delivered by perforation; (2.) In all cases the head could be brought over the perineum with less tear. With regard to their use in the flat pelvis he had had no experience, but thought that the head would be less compressed antero-posteriorly when the blades were fixed with the screw than when they were brought forcibly together with the hand. An important question was, What are we to teach our students? He taught that they should use these forceps in all cases. It was interesting to see that after a student had tried on the phantom the ordinary forceps and then the axis-traction forceps of Professor Simpson, he at once gave the preference to the latter instrument.

*Dr Ronaldson* said that ever since Dr Bell had shown the axis-traction forceps to the Society he had felt convinced that the principle was of value. After Professor Simpson introduced his model he began to use them, and had done so since. At first he found difficulty in adjusting the lock and locking plate, but this was soon got over. He used them in all cases, because you could with them deliver more easily, more accurately, and with less risk of tearing the perineum.

*Professor Stadtfeld* of Copenhagen thought these forceps were good for cases with the head at the brim. The additional expense of the instrument and its rather complicated construction would prevent their being adopted by young practitioners, who always preferred the cheaper and less complicated article.

*The President*, in replying, said he had only to thank the other Fellows for the free expression of opinion on this subject. There was nothing like the test of experience to settle such questions, and so far this had been in favour of axis-traction. The objections made by Professor Stadtfeld were valid, but he thought the additional expense would be found by the practitioner to be well spent money. As to Dr Angus Macdonald's suggestion of having removable rods, he had tried these in the first model of the instrument, but found it was better to have them fixed, and to use them in all cases. The locking was, no doubt, troublesome at first, just as it was troublesome for small boys to button their clothes, but



it became easy on practice. The most lasting objection to axis-traction would come from the operating gynecologist, who would complain of having fewer perineums to repair.

VI. The REPORT OF THE ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL for Quarter ending 30th April 1883 was read by *Dr Angus Macdonald*, which will appear in a future number of this Journal.

*The President* expressed the thanks of the Society to *Dr Angus Macdonald* for his report. It was a great pleasure and satisfaction to have him back again and able to take part in the Society's proceedings after his enforced absence.

VII. A NOTE OF A CASE OF SARCOMA OF BOTH OVARIES, by *Dr H. A. Lediard* of Carlisle, was communicated by *Professor Simpson*, which will appear in a future number of this Journal.

*The President*, in the name of the Fellows, thanked *Dr Lediard* for his interesting communication, and proposed that the specimens be kept by the Pathological Committee, to be examined and reported on early in the next session, when they would report on the various other pathological specimens which had been handed over to them.

*Professor Stadtfeld* of Copenhagen was introduced to the Society by the President, and, on thanking the Fellows for their kind reception, expressed the hope that he might be able to show a similar kindness to some of them at the meeting of the International Congress at Copenhagen this year.

*Thomas Pairman, Esq., L.R.C.P. & S., Biggar*, was elected a Fellow of the Society. *Dr Andrew Murray Gibson, Portobello*, and *Dr N. T. Brewis*, were elected Fellows at the meeting on 23rd June.

1883.

### ADDRESS TO STUDENTS.

WITH the return of October come the usual preparations for the commencement of another winter session. Professors and teachers are putting themselves in readiness for the advent of the "new-born babes in science and the lustier nurslings" of a year or more's growth to whom they hope to impart what they can of the knowledge requisite for that skill in healing to which, we presume, it is the desire of every well-regulated student of medicine to attain. For, after all, healing, or putting a patient in the way of healing, is and must be the great business of a doctor's life, and his predilections for scientific work of any other kind must take a very secondary place. Nearly two hundred years have elapsed since *Guy Patin* so tersely described the physician as "a good man skilled in healing"—*Medicus est vir bonus, peritus medendi*. It is not given to all men to be both great and good; but it is within the reach of every one of us to be good and to attain to some skill in the profession



of our choice. But as there is no royal road to learning, neither is there one to medical knowledge, though a considerable fraction of the British public seem to think there is, if we may judge of their patronage of quacks, herbalists, and "American doctors" fresh from the diploma-manufacturing mills that disgrace the States.

Skill is attained but gradually, in the first instance by a careful and steady application to the work as it is mapped out and arranged in the curriculum of study, and secondly by the wise use of that experience of men and women which cannot be found in books nor in the lectures of a college professor, but may be gained by a study of the subjects themselves. Neither the scientific nor the practical can well be neglected. A scientific training is a necessity to every medical man. The practice of medicine and surgery is founded on scientific data which must be known and understood before the practice itself is appreciated. A knowledge of the various structures in the human body is necessary to a correct understanding of their functions; a knowledge of both structure and function is requisite for the proper appreciation of their diseased states; while a knowledge of all three is needful if we wish to be instrumental in restoring them, when diseased, to their normal conditions. The scientific and the practical must go together. Doubtless medical students are taught many so-called scientific facts, and sometimes also scientific errors, which are of little value so far as medicine is concerned; but it would be very unwise of any one, before he has obtained his diploma, at least, to make of himself a judge as to what is of value and what is not, and receive or reject accordingly. Better is it that he should possess his soul in patience until the time comes when, past the fear of examiners, he can with some degree of safety accept and believe what he pleases. In the meantime it is his duty to master the elements, to pursue his studies as they are arranged for him, and to take everything in its proper order. Methodical ways are the best and shortest in the long run. Some there are who think themselves able for third or fourth year's work before they have well passed their preliminary examination, or fitted to attend dispensary patients before they have properly learnt their "bones," or to undertake the management of labour though they know nothing of the female pelvis or of the physiology of reproduction. Ambitious attempts like these cannot but end unsuccessfully so far as the student is concerned. His endeavours to pass his examinations are futile. As the time flies he finds himself among the "chronics," and, if he has scholarship enough, perhaps laments, like the Sabine singer,—

"What Horace says is,

*Eheu fugaces*

*Anni labuntur, Postume, Postume—*

*Years glide away and are lost to me,—lost to me."*

But if it is necessary that a student should attend carefully to his

books and lectures, to his practical work in the anatomical rooms and histological laboratories, it is equally necessary that he should study disease with assiduity at the bedside. This introduces the moot question as to whether a student should begin his hospital attendance in his first year. Our own opinion is that he should. It is not necessary, nor even advisable, that he should begin work as a dresser so early; but it is well that he should become familiar with the various types of disease which are met with in walking the hospital. Well, also, that he should observe how the surgeon uses his eyes and his hands in the examination and treatment of his cases; should listen to the questions that may be put and the answers they elicit; and further, should see how important the dry details of anatomy become in relation to operations which are so often performed in the vicinity of important structures. Clinical teachers of great experience—among others, the late Dr Graves of Dublin, author of the famous work on clinical medicine—have insisted on the necessity of the student early commencing to visit the hospital. Without attempting to study disease minutely, the first year's student of average ability may certainly familiarize himself with some of the more common appearances of disease as seen at the bedside. For the more advanced student daily attendance at hospital is absolutely essential. Regular visits to the wards and beds are of vastly greater importance than some of the so-called formal clinical lectures. (And, by the way, how much that same word "clinical" is abused! Clinical teaching is teaching at the bedside, or with a patient for a text; but times without number do we find papers and lectures of the most abstract nature, without even a reference to a patient's case, essays on the classification of tumours or the chemistry of biliary calculi, published in our journals with the unblushing title, "A Clinical Lecture.") It is only by clinical study that the student may come to know and understand that which is of vital importance to both patient and doctor, viz., nature's methods in getting rid of disease, for, after all said and done, he it is who understands nature's methods best that hath most skill in healing. We fear that even yet this truth is not so thoroughly appreciated as it should be. We are in many things still slaves to the erroneous ideas of physicians of a former time, even when we think we are profiting by their accumulated experience. In no way is this better shown than in the treatment of epilepsy by nitrate of silver, regarding which Oliver Wendell Holmes, in a note to his wise and excellent address on *Currents and Counter-Currents in Medical Science* (an address we would recommend to the careful consideration of every student and practitioner of medicine), writes, "There is good reason to doubt whether the nitrate of silver has any real efficacy in epilepsy. It has seemed to cure many cases; but epilepsy is a very uncertain disease, and there is hardly anything which has not been supposed to cure it. . . . 'Did you ever see a case of epilepsy cured by



nitrate of silver?' I said to one of the oldest and most experienced surgeons in this country. 'Never!' was his instant reply. Dr Twitchell's experience was very similar. How, then, did nitrate of silver come to be given for epilepsy? Because, as Dr Martin has so well reminded us, lunatics were considered formerly to be under the special influence of Luna, the moon, and lunar caustic, or nitrate of silver, is a salt of that metal, which was called luna from its whiteness, and, of course, must be in closest relations with the moon. It follows beyond all reasonable question that the moon's metal, silver, and its preparations, must be the specific remedy for moon-blasted maniacs and epileptics. Yet the practitioner who prescribes the nitrate of silver supposes he is guided by the solemn experience of the past, instead of by its idle fancies. He laughs at those old physicians who placed such confidence in the right hind foot of an elk as a remedy for the same disease, and leaves the record of his own belief in a treatment quite as fanciful and far more objectionable, written in indelible ink upon a living tablet, where he who runs may read it for a whole generation, if nature spares his walking advertisement so long." The sooner nature's methods are understood and followed, the better will it be for both doctors and their patients. The older a physician becomes, and the more his experience grows, the less is he inclined to pour in drugs. Dr Jackson of Boston, in his *Letters to a Young Physician*, declared it to be a very narrow and unjust view of the practice of medicine to suppose it to consist altogether in the use of powerful drugs, or of drugs of any kind; and he is undoubtedly right. Not that we would like to be understood as declaring that the *Materia Medica* have no value in the treatment of disease. Very far from it. But it is well to remember that every drug (by which we mean every agent used in the treatment of disease which is not of the nature of a food by reason of its not containing any of the constituents of the human body), is to a certain extent hurtful in its operations. It is only when we feel that the benefit derived from its use is likely to greatly exceed its baneful effects that it should be administered. In the address above referred to, Holmes illustrates this point as follows:—"All appliances which are not natural food or stimuli, all medicines proper, cost a patient, on the average, five per cent. of his vital force, let us say. Twenty times as much waste of force produced by any of them, that is, would exactly kill him, nothing less than kill him, and nothing more. . . . In the game of Life-or-Death, Rouge et Noir, as played between the doctor and the sexton, this five per cent. this certain small injury entering into the chances, is clearly the sexton's perquisite for keeping the green table over which the game is played, and where he hoards up his gains. Suppose a blister to diminish a man's pain, effusion, or dyspnea, to the saving of twenty per cent. in vital force, his profit from that is fifteen in that case, for it always hurts him five to begin with, according to



our previous assumption." Thus and thus only can skill in healing be attained, by trusting to nature rather than to art, and by calling in art only as an aid to nature. Nature's ways are not to be rejected with impunity.

But in these days more than skill in healing is required of the physician. He must be skilled in the prevention of disease. He must have a knowledge of the laws which govern the health both of the individual and of the community, and highly important it is that he should give an example of obedience to these laws in his own person. Health is too great a blessing to be trifled with; and if any student, in reading this address, is tempted to do wonders in his studies, we hope he will accept this *caveat*. Overwork tends to ill-health, and a man who is in a chronic condition of illness can never be "vir bonus, peritus medendi."

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### INFORMATION REGARDING MEDICAL EDUCATION AND EXAMINATIONS.

THE following are the Regulations of the General Medical Council for the Registration of Medical Students:—

EXTRACT FROM MINUTE OF MEETING OF GENERAL MEDICAL COUNCIL OF JULY 14, 1880.—Moved by Mr Turner, seconded by Sir James Paget, and agreed to:—"That the General Council's amended *Recommendations on Education and Examination* be communicated to the several Examining Boards whose Examinations are recognised by the Council; that their attention be drawn to the changes which have been made; that they be informed that the Council proposes that the additional requirements be not made obligatory on students till January 1, 1882; and that, on and after that date no person be allowed to be registered as a Medical Student unless he shall have previously passed a Preliminary Examination in the subjects of General Education as specified in the following list:—1. English Language, including Grammar and Composition;<sup>1</sup> 2. English History; 3. Modern Geography; 4. Latin, including Translation from the original, and Grammar; 5. Elements of Mathematics, comprising (a) Arithmetic, including Vulgar and Decimal Fractions; (b) Algebra, including Simple Equations; (c) Geometry, including the first two books of Euclid or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;<sup>2</sup> 7. One of the following optional subjects:—(1) Greek; (2) French; (3) German; [(4) Italian; (5) any other Modern Language; (6) Logic; (7) Botany; (8) Elementary Chemistry.]"<sup>3</sup>

The following Testimonials of having passed the Preliminary Examination in General Education are accepted by the Colleges:—

<sup>1</sup> The General Medical Council will not consider any Examination in English sufficient that does not fully test the ability of the candidate:—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use.

<sup>2</sup> This subject may be passed either as Preliminary, or before, or at the first Professional Examination.

<sup>3</sup> The Preliminary Examinations for the License of the Royal College of Surgeons do not include the subjects between brackets, but if they have been passed at any of the Examinations recognised by the General Medical Council, they will be accepted as optional subjects in conformity with the above Regulations.

## (1.) UNIVERSITIES OF THE UNITED KINGDOM.

*Oxford*.—Examination for a Degree in Arts. Responsions, Moderations, Local Examinations (Senior), Certificate to include Latin and Mathematics. Local Examinations (Junior), Certificate to include Latin and Mathematics; and also one of the following optional subjects:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

*Cambridge*.—Examination for a Degree in Arts. Previous Examination. Local Examinations (Senior), Certificate to include Latin and Mathematics. Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. Higher Local Examinations.

*Durham*.—Examination for a Degree in Arts. Examination for Students in their second and first years. Registration Examination for Medical Students. Local Examinations (Senior), Certificate to include Latin and Mathematics. Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

*Oxford and Cambridge Schools' Examination Board*.—Certificate to include English Language, including Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, First two books of Euclid; Latin, including Translation and Grammar; and one of the following optional subjects:—Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

*London*.—Examination for a Degree in Arts. Preliminary Scientific (M.B.) Examination. Matriculation Examination.

*Aberdeen, Edinburgh, Glasgow, and St Andrews*.—Examination for a Degree in Arts. Preliminary Examination for Graduation in Medicine or Surgery.

*Edinburgh, Aberdeen, and St Andrews*.—Examination of (Senior) Candidates or Honorary Certificates under the Local Examinations of these Universities.

*Dublin*.—Examination for a Degree in Arts. Entrance Examination.

*Queen's University (Ireland)*.—Examination for a Degree in Arts. Entrance Examination. Examination for Diploma of Licentiate in Arts. Previous Examination for B.A. Degree. Local Examinations, including all the subjects required.

*Royal University of Ireland*.—Matriculation Examination.

*Queen's Colleges in Ireland*.—Matriculation Examination.

*Edinburgh*.—Entrance Examination for a Three Years' Course in Arts.

## (2.) OTHER BODIES NAMED IN SCHEDULE (A) TO THE MEDICAL ACT.

*Royal College of Surgeons of England*.—Examination conducted under the Superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors.

*The Society of Apothecaries of London*.—Examination in Arts.

*Royal Colleges of Physicians and Surgeons, Edinburgh*.—Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined.

*Faculty of Physicians and Surgeons of Glasgow*.—Preliminary Examination in General Literature.

*Royal College of Surgeons in Ireland*.—Preliminary Examination, Certificate to include all the subjects required.

*Apothecaries' Hall of Ireland*.—Preliminary Examination in General Education.

## (3.) EXAMINING BODIES IN THE UNITED KINGDOM NOT INCLUDED IN SCHEDULE (A) TO THE MEDICAL ACT.

*Royal College of Preceptors*.—Examination for a First or Second Class Certificate.



*Intermediate Education Board of Ireland; Junior, Middle, and Senior Grades.*—Certificate to include all the subjects required by the General Medical Council.

*The Examiners for Commissions and Appointments in Her Majesty's Service, Military, Naval, and Civil.*—Certificate to include all the subjects required by the General Medical Council.

#### (4.) INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.

*Universities of Calcutta, Madras, and Bombay.*—Entrance Examination, Certificate to include Latin.

*M'Gill College, and Bishop's College, Montreal.*—Matriculation Examination.

*University of Toronto, Trinity College, Toronto, Queen's College, Kingston, and Victoria College, Upper Canada.*—Matriculation Examination.

*King's College, Nova Scotia.*—Matriculation Examination. Responsions.

*Medical College, Halifax, Nova Scotia.*—Matriculation Examination.

*University of Fredericton, New Brunswick.*—Matriculation Examination.

*University of Melbourne.*—Matriculation Examination, Certificate to include all the subjects required by the General Medical Council.

*University of Sydney.*—Matriculation Examination.

*University of the Cape of Good Hope.*—Matriculation Examination.

*University of Adelaide.*—Matriculation Examination. Primary Examination.

*Codrington College, Barbadoes.*—1. English Certificate for Students of two years' standing, specifying the subjects of Examination. 2. Latin Certificate, or "Testamur."

*Tasmanian Council of Education.*—Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.

*Christ's College, Canterbury, New Zealand.*—Voluntary Examinations. Certificate to include all the subjects required by the General Medical Council.

*University of Otago, New Zealand.*—Matriculation Examination.

*Ceylon Medical College.*—Preliminary Examination.

*Germany and other Continental Countries.*—Gymnasial Abiturienten Examen, and Corresponding Certificate from the Universities.

*Gymnasia of the Circuit of Dorpat.*—Examination of Maturity.

*Dalhousie College and University, Halifax, Nova Scotia.*—Matriculation and Sessional Examinations.

*University of Manitoba.*—Previous Examinations.

*University of New Zealand.*—Entrance Examination.

*University of California.*—Examination in Department of Letters.

The following pages contain a tabular abstract of the regulations of the various Licensing Boards, as well as a list of the Hospitals, Dispensaries, etc., attached to our Scotch Medical Schools; also the regulations for the Army, Indian, and Navy Medical Services. The space at our disposal does not allow of more detailed information. But, in point of fact, the regulations of all Licensing Boards now correspond much more closely than they used to do, and the regulations of the General Medical Council afford a key to the general requirements of all of them. For special information, application should always be made to the Secretaries of the Licensing Boards; or, in the case of the Universities, recourse may be had to the published Calendars.

The *Preliminary Examinations* are usually held before the commencement, and at the end, of the Winter Session,—viz., in October, March, or April—sometimes also at the end of the Summer Session. The Professional Examinations in Universities are usually after the Winter and during the Summer Sessions; in Edinburgh, however, the first Professional is held in October as well as April. The other Licensing Boards' examinations are held at various periods throughout the year. Special examinations, under circumstances of urgency, can be held at almost any time; but they, of course, entail considerable addition to the expense.



## COURSE OF STUDY REQUIRED BY THE VARIOUS BOARDS OF THE UNITED KINGDOM.

|   | Age.   | Anatomy. | Dissections. | Chemistry. | Practical Chemistry. | Materia Medica. | Physiology or Institutes of Medicine. | Surgery. | Practice of Medicine. | Midwifery. | Medical Jurisprudence. | Pathology or Morbid Anatomy. | Botany. | Natural History. | Practical Pharmacy. | Clinical Surgery. | Clinical Medicine. | Hospital Attendance. | Practical Midwifery. | Dispensary or Out-door Practice. | Vaccination. |
|---|--------|----------|--------------|------------|----------------------|-----------------|---------------------------------------|----------|-----------------------|------------|------------------------|------------------------------|---------|------------------|---------------------|-------------------|--------------------|----------------------|----------------------|----------------------------------|--------------|
|   | Years. | Mons.    | Mons.        | Mons.      | Mons.                | Mons.           | Mons.                                 | Mons.    | Mons.                 | Mons.      | Mons.                  | Mons.                        | Mons.   | Mons.            | Mons.               | Mons.             | Mons.              | Mons.                | Mons.                | Mons.                            | Mons.        |
| Edinburgh University, M.B. & C.M.,  | 21     | 6        | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 3       | 3                | 3                   | 6                 | 6                  | 24                   | 6                    | 6                                | 6            |
| University of Glasgow, M.B. & C.M.,   | 21     | 6        | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 3       | 3                | 3                   | 6                 | 6                  | 24                   | 6                    | 6                                | 6            |
| University of Aberdeen, M.B. & C.M.,  | 21     | 6        | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 3       | 3                | 3                   | 6                 | 6                  | 24                   | 6                    | 6                                | 6            |
| University of St Andrews, M.B. & C.M.,  | 21     | 6        | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 3       | 3                | 3                   | 6                 | 6                  | 24                   | 6                    | 6                                | 6            |
| London University, M.B.,  | 21     | 6        | 12           | 6          | 6                    | 1 cts.          | 6                                     | 6        | 6                     | 1 cts.     | 1 cts.                 | 6                            | 6       | 6                | 1 cts.              | 6                 | 6                  | 24                   | 6                    | 6                                | 6            |
| University of Durham, M.B. & M.D.,  | 21     | 6        | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 6                   | 2 yrs.            | 2 yrs.             | 4 yrs.               | 20 cas.              | 6                                | 6            |
| Dublin University, M.B.,  | 21     | 6        | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 6                   | 2 yrs.            | 2 yrs.             | 4 yrs.               | 20 cas.              | 6                                | 6            |
| " Queen's University, Surgical Diploma,   | 12     | 18       | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 6                   | 27                | 27                 | 27                   | 24                   | 6 mo.                            | 6            |
| Royal College of Physicians of Ireland, M.D.,   | 12     | 12       | 6            | 6          | 6                    | 6               | 12                                    | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3 mos.              | 12                | 12                 | 24                   | 3 mo.                | 6                                | 6            |
| Royal College of Physicians, Edinburgh,   | 21     | 12       | 6            | 6          | 6                    | 6               | 12                                    | 6        | 12                    | 6          | 6                      | 6                            | 6       | 6                | 3                   | 3                 | 6                  | 24                   | 20 cas.              | 6                                | 6            |
| King and Queen's Col. of Phys. Ireland,   | 21     | 6        | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 3                 | 6                  | 24                   | 6 cas.               | 6                                | 6            |
| Royal College of Surgeons, London,*   | 21     | 12       | 12           | 6          | 6                    | 6               | 12                                    | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 6                 | 21                 | 27                   | 6 mo.                | 6                                | 6            |
| Royal College of Surgeons, Dublin,  | 21     | 18       | 18           | 6          | 6                    | 6               | 18                                    | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 27*               | 9*                 | 33                   | 27                   | 6 mo.                            | 6            |
| Royal College of Surgeons, Edinburgh,   | 21     | 12       | 12           | 6          | 6                    | 6               | 18                                    | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 18                | 6                  | 24                   | 6 cas.               | 6                                | 6            |
| Faculty of Phys. and Surgeons, Glasgow,   | 21     | 12       | 12           | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 6 or 12           | 6                  | 24                   | 6 cas.               | 6                                | 6            |
| For Double Qualification by Royal Col-<br>leges Phys. and Surgs. of Edinburgh,  | 21     | 12       | 12           | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 6 or 12           | 6                  | 24                   | 6 cas.               | 6                                | 6            |
| For Double Qualification by Royal Col-<br>lege Phys. Edinburgh, and Faculty of<br>Physicians and Surgeons of Glasgow, | 21     | 12       | 12           | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 6 or 12           | 6                  | 24                   | 6 cas.               | 6                                | 6            |
| Apothecaries' Hall, England, . . . . .  | 21     | 12       | 6            | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 6 or 12           | 6                  | 24                   | 6 cas.               | 6                                | 6            |
| " " Ireland, . . . . .  | 21     | 6        | 12           | 6          | 6                    | 6               | 6                                     | 6        | 6                     | 6          | 6                      | 6                            | 6       | 6                | 3                   | 6 or 12           | 12                 | 24                   | 6 cas.               | 6                                | 6            |
|   |        |          |              |            |                      |                 |                                       |          |                       |            |                        |                              |         |                  | Appr.               | 9                 | 27                 | 27                   | 20 cas.              | 20 cas.                          | 9 mo.        |

ENGLISH POOR-LAW BOARD.—Candidates for the appointment of Medical Officer are required to be registered under the Medical Act, and must be legally qualified to practise both Medicine and Surgery, in virtue of Diplomas or Licenses granted by competent legal authority in England, Scotland, or Ireland.

Information respecting exceptions to these regulations under various circumstances, and other details as to the order in which, according to some Licensing Bodies, the courses should be taken out, etc., must be obtained by consulting the published Charts of the Colleges, etc. Students should apply to the Secretary to each Board which they intend to pass for a detailed copy of its Regulations.

\* Students from the Schools of Scotland are admitted to examination at the Royal College of Surgeons of England, if they have followed the course of study required by the regulations of the Royal College of Surgeons of Edinburgh. Students in Scotland, therefore, are not required to attend more than one course of Physiology, six months Clinical Surgery, six months Clinical Medicine, and twenty-four months hospital.

## MEDICAL SCHOOLS OF SCOTLAND, 1883-84.

## WINTER SESSION.

| SUBJECTS.   | UNIVERSITY OF EDINBURGH.                           | SCHOOL OF MEDICINE, EDINBURGH.   | UNIVERSITY OF GLASGOW.                                   | ANDERSON'S COLLEGE, GLASGOW.           | GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE. | WESTERN MEDICAL SCHOOL, GLASGOW.     | UNIVERSITY OF ABERDEEN.                 | UNIVERSITY OF ST ANDREWS. |
|---|--|--|--|--|---|--------------------------------------|---|---------------------------|
| Anatomy, Systematic and Practical, with Demonstrations. | Professor Turner.                                  | Mr J. Symington and Mr Cathcart.†  | Professor Cleland.                                       | Dr A. M. Buchanan.                     | Mr H. E. Clark.                             | ...                                  | Professor Struthers.                    | ...                       |
| Physiology, or Institutes of Medicine.*                 | Professor Rutherford.                              | Dr James and Mr James Hunter.†   | Professor M'Kendrick.                                    | ...                                    | Dr John Barlow.                             | Dr Limont.                           | Professor Stirling.                     | Prof. Pettigrew.          |
| Chemistry, and Practical and Analytical Chemistry.      | Professor C. Brown.                                | Dr Macadam, Mr King, Mr I. Macadam, Dr Drinkwater, and Mr J. Y. Buchanan.† | Professor J. Ferguson.                                   | Professor Dittmar.                     | Dr James M. Milne.                          | Mr Milne.                            | Professor Brazier.                      | Prof. Heddle.             |
| Materia Medica and Therapeutics.                        | Professor Fraser.                                  | Dr Molinet and Dr Wm. Craig.†  | Professor Charteris.                                     | Dr Morton.                             | Dr John Dougall.                            | Dr Carmichael.                       | Professor Davidson.                     | ...                       |
| Practice of Medicine.                                   | Professor Grainger Stewart.                        | Drs Wyllie, Affleck, and Bramwell.†  | Professor Gairdner.                                      | Dr S. Gemmell.                         | Dr J. W. Anderson.                          | Dr M'Vail.                           | Prof. Smith-Shand.                      | ...                       |
| Surgery.  | Professor Chiene.                                  | Mr Duncan, Mr Miller, Dr C. W. MacGillivray.                               | Professor Macleod.                                       | Dr Dunlop.                             | Dr W. Macewen.                              | Dr Knox.                             | Professor A. Ogston.                    | ...                       |
| Midwifery, etc.   | Professor Simpson.                                 | Drs H. Croom, C. Bell, P. Young, Ang. Macdonald, D. B. Hart.†              | Professor Leishman.                                      | In Summer.                             | In Summer.                                  | Dr W. L. Reid.                       | Professor Stephenson.                   | ...                       |
| Natural Philosophy.                                     | Professor Tait.                                    | ...  | Professor Sir Wm. Thomson.                               | Prof. Blyth.                           | ...   | ...                                  | ...                                     | Prof. Butler.             |
| Natural History.  | Professor Cossar Ewart.                            | Dr A. Wilson.  | Professor Young.   | ...                                    | ...   | ...                                  | Professor A. Nicholson.                 | Prof. Mackintosh.         |
| General Pathology.                                      | Professor Greenfield.                              | Dr Bulst.  | Dr Joseph Coats.   | At Royal or Western Infirmary.         | In Summer.                                  | At Western Infirmary.                | Professor Hamilton.                     | ...                       |
| Clinical Medicine.                                      | Professors MacLagan, G. Stewart, and T. R. Fraser. | Drs Muirhead, Brakenridge, and Wyllie.†                                    | Prof. M'Call Anderson & Physicians of Western Infirmary. | The Physicians of the Royal Infirmary. |   | Physicians of the Western Infirmary. | Drs Smith-Shand, Beveridge, and Fraser. | ...                       |
| Clinical Surgery.                                       | Professor Annandale.                               | Mr Joseph Bell.  | Prof. George Buchanan & Surgeons of Western Infirmary.   | The Surgeons of the Royal Infirmary.   |   | Surgeons of the Western Infirmary.   | Drs Ogston, O. Will, and Garden.        | ...                       |

Lectures are given in Edinburgh during the Winter Session on the Diseases of the Ear by Dr Kirk Duncanson, on Diseases of the Eye by Dr John Robertson, and on Diseases of Children by Dr James Andrew and Dr James Carmichael.

Practical Physiology is taught by the respective professors during the Winter Session in Edinburgh and Aberdeen.

Practical Surgery is taught during the Winter Session in the University of Aberdeen by Professor Ogston and Assistant.

\* This course is equivalent to that given under the name of General Anatomy and Physiology in the English Schools. Special schedules are issued by the London Boards for their Scotch students, which should always be inquired for.

† These are not conjoint courses, but separate ones by the gentlemen named.

‡ This is a joint course.



## MEDICAL SCHOOLS OF SCOTLAND, 1884.

## SUMMER SESSION.

| SUBJECTS.                                  | UNIVERSITY OF EDINBURGH.                 | SCHOOL OF MEDICINE, EDINBURGH.   | UNIVERSITY OF GLASGOW.                                | ANDERSON'S COLLEGE, GLASGOW.           | GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE. | WESTERN MEDICAL SCHOOL, GLASGOW. | UNIVERSITY OF ABERDEEN.                 |
|--|--|--|---|--|---|----------------------------------|---|
| Practical Anatomy and Demonstrations.      | Professor Turner.                        | Mr J. Symington and Mr Cathcart.*  | Professor Cleland.                                    | Dr A. M. Buchanan.                     | Mr H. E. Clark.                             | ...                              | Professor Struthers.                    |
| Botany.                                    | Professor Dickson.                       | ...  | Professor Bayley Balfour.                             | Prof. Wilson.                          | ...   | ...                              | Professor J. W. H. Trail.               |
| Materia Medica.                            | Professor Fraser.                        | Dr Moinet and Dr Craig.*   | ...   | Dr Morton.                             | In Winter.                                  | Dr Carmichael.                   | Professor Davidson.                     |
| Midwifery, etc.                            | Professor Simpson.                       | Drs Angus Macdonald, Croom, Chas. Bell, P. Young, and Berry Hart.*         | Professor Leishman.                                   | Dr A. Wallace.                         | Dr James Stirton.                           | Dr W. L. Reid.                   | Prof. W. Stephenson.                    |
| Medical Jurisprudence and Public Health.   | Professor MacLagan.†                     | Dr Littlejohn.‡  | Professor Simpson.‡                                   | Dr Alex. Lindsay and Dr Christie.      | Mr John Glaister.                           | Dr Eben. Duncan.                 | Professor M. Hay.‡                      |
| Comparative Anatomy.                       | Professor Turner.                        | Mr Cathcart.   | Professor Young.‡                                     | ...                                    | ...   | ...                              | Professor Struthers.                    |
| Practical Physiology, including Histology. | Professor Rutherford.                    | Mr James Hunter.   | Professor M'Kendrick.                                 | ...                                    | Dr Barlow.                                  | Dr Limont.                       | Professor Stirling.                     |
| Practical Pathology, including Histology.  | Professor Greenfield.                    | Dr Buist.  | Dr Joseph Coats.                                      | Dr Newman, at Royal Infirmary.         | Dr Newman.                                  | At Western Infirmary.            | Professor Hamilton.                     |
| Practical and Analytical Chemistry.        | Professor Crum Brown.                    | Dr Macadam, Mr King, Mr I. Macadam, Dr Drinkwater, and Mr J. Y. Buchanan.* | Professor J. Ferguson.                                | Professor Dittmar.                     | Dr J. M. Milne.                             | Mr Milne.                        | Professor Brazier.                      |
| Operative Surgery.                         | Professor Chiene.                        | Mr Duncan, Mr Miller, Dr C. W. Mac-Gillivray.*                             | Professor Macleod.                                    | Dr Dunlop.                             | Dr W. Macgeen.                              | Dr Knox.                         | Professor A. Ogston.                    |
| Mental Diseases.                           | Dr Clouston.                             | ...  | Dr Yellowlees.  | ...                                    | Dr Alex. Robertson.                         | ...                              | Dr Reid.                                |
| Natural History.                           | Professor Cossar Ewart.                  | Dr A. Wilson.  | Professor Young.                                      | ...                                    | ...   | ...                              | Professor Nicholson.                    |
| Clinical Medicine.                         | Professors G. Stewart, and T. R. Fraser. | Drs Muirhead, Brakenridge, and Wyllie.‡                                    | Prof. McCall Anderson and Physicians of W. Infirmary. | The Physicians of the Royal Infirmary. |   | Physicians of Western Infirmary. | Drs Smith-Shand, Beveridge, and Fraser. |
| Clinical Surgery.                          | Professor Annandale.                     | Mr Joseph Bell.  | Prof. George Buchanan and Surgeons of W. Infirmary.   | The Surgeons of the Royal Infirmary.   |   | Surgeons of Western Infirmary.   | Drs Ogston, O. Will, and Garden.        |

Operative Surgery is taught during the Summer in Edinburgh by Mr Duncan and Mr Miller, and in Glasgow by Professor Macleod and Dr Knox. Instruction in Vaccination is also given at the Royal Public Dispensary, Edinburgh, on Wednesdays and Saturdays at 12, both Summer and Winter, by Dr Husband; at the Faculty Hall, Glasgow, on Mondays at 12, by Dr Thomson; and at the Royal Infirmary, Glasgow, on Mondays and Thursdays at 12 o'clock, by Dr Tannahill, and Dr M'Vail, at Western Infirmary, on Mondays at 1 p.m. Medical Psychology and Insanity are taught in Summer by Dr Clouston and Dr J. B. Tuke in Edinburgh, in Glasgow by Dr Yellowlees and Dr Robertson, and in Aberdeen by Dr Reid: Practical Medicine and Medical Diagnosis by Dr Byrom Bramwell in Edinburgh; the Diseases of Children by Drs Andrew and Carmichael in Edinburgh; the Diseases of the Eye by Dr John Robertson and Mr George Berry in Edinburgh, Professor A. Dyce Davidson in Aberdeen, and by Dr Thomas Reid, Mr Clark, and Dr Wolfe in Glasgow; the Diseases of the Ear by Dr Kirk Duncanson and Dr M'Bride in Edinburgh, by Dr J. P. Cassells, Dr Johnston Macfie, and Dr Barr in Glasgow, and in Aberdeen, Ear and Larynx Diseases, by Dr M'Kenzie Booth; Diseases of the Skin by Dr Allan Jamieson in Edinburgh, and in Aberdeen by Dr Garden; and Dental Surgery by Dr J. C. Woodburn in Glasgow, and Dr Williamson in Aberdeen. Lectures on Public Health are delivered during the Summer Session in Aberdeen by Dr Simpson.

\* These are not conjoint courses, but separate ones by the gentlemen named.

† Dr Hay delivers his courses in Winter, but Practical Toxicology is taught in Summer. Dr Littlejohn gives courses during both the Winter and Summer Sessions. Dr MacLagan also lectures during both Summer and Winter. The Winter Course is chiefly intended for law students, but is open to medical students also.

‡ This is a joint course. || In Winter.

\*.\* For additional Summer Courses on special subjects, see the Prospectus of each School.



# LIST OF HOSPITALS, DISPENSARIES, ETC., IN CONNEXION WITH THE MEDICAL SCHOOLS OF SCOTLAND.

## EDINBURGH.

**ROYAL INFIRMARY**, including **LOCK HOSPITAL**. Upwards of 560 Beds. Visits daily from 12 till 2 P.M. Physicians, Drs MacLagan, Grainger Stewart, Fraser, and Greenfield, Professors of Clinical Medicine; Professor Simpson and Dr Angus Macdonald (for Diseases of Women); Drs Claud Muirhead, D. J. Brakenridge, and John Wyllie, Clinical Lecturers. Assistant Physicians, Drs James O. Affleck, Andrew Smart, and Alex. James. Consulting Physicians, Dr D. R. Haldane; Dr Alex. Keiller (for Diseases of Women). Pathologist, Dr Byrom Bramwell. Surgeons—Professors Annandale and Chiene, Mr Joseph Bell, Mr John Duncan, and Mr A. G. Miller. Extra Surgeons, Dr P. H. Watson; Dr Thomas Keith (for Ovarian Diseases). Assistant Surgeons, Drs P. H. Maclaren, John Bishop, Chas. W. MacGillivray, and J. M. Cotterill. Consulting Surgeons, Dr Dunsmure and Dr Gillespie. Ophthalmic Surgeon, Dr Argyll Robertson. Assistant Ophthalmic Surgeon, Mr Berry. Dental Surgeon, Dr John Smith. Aural Surgeon, Dr P. M'Bride.

**CONVALESCENT HOUSE**, Corstorphine. Acting Surgeon, Dr Bishop.

**CHALMERS HOSPITAL FOR THE SICK AND HURT**. 24 Beds for medical and surgical patients. Physician, Dr Halliday Douglas. Surgeon, Dr P. H. Watson.

**ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL**. 30 Beds; from 200 to 300 in-patients and about 450 out-patients yearly. Consulting Physicians, Drs Moir and Graham Weir. Consulting Surgeon, Dr Dunsmure. Physicians, Dr Keiller, Professor Simpson, Drs Halliday Croom and Angus Macdonald. Secretary and Treasurer, J. Turnbull Smith, C.A.

**ROYAL HOSPITAL FOR SICK CHILDREN**. 80 Beds; average number of out-patients, about 6000. Consulting Physicians, Dr C. Wilson, Dr Graham Weir, and Dr Peel Ritchie. Consulting Surgeon, Professor Annandale. Pathologist, Dr G. L. Woodhead. Physicians, Drs J. Dunsmure, jun., J. Andrew, C. E. Underhill, and R. J. Blair Cunynghame. Extra Physicians, Drs Carmichael and Playfair. Surgeon-Dentist, Dr Smith. Ophthalmic Surgeon, Dr Argyll Robertson.

**ROYAL PUBLIC DISPENSARY AND VACCINE INSTITUTION**. About 12,000 patients annually. Consulting Physician, Dr Haldane. Medical Officers, Drs W. Husband, D. Wilson, Andrew, Moinet, Sinclair, Allan Jamieson, Cotterill, Waller, A. Husband, Spence, P. Young, Dyce Fraser, and A. Black. Consulting Physicians-Accoucheur, Drs Keiller and Charles Bell. Midwifery and Diseases of Women, Drs Andrew and Young. Diseases of the Skin, Dr A. Jamieson. Vaccination, Dr W. Husband. Apothecary, Mr John Nicol. Clinique daily at 3 P.M. Vaccination, Wednesday and Saturday, 12 noon. Midwifery and Diseases of Women, Tuesday and Friday, 1 P.M. Diseases of the Skin, Wednesday and Saturday, 1 P.M. Laboratory, 3 P.M. and 7 P.M. James Andrew, M.D., Secretary to the Medical Officers.

**NEW TOWN DISPENSARY**. About 10,000 patients annually. Medical Officers, Drs Cadell, Montgomerie Bell, Gibson, Wood, Caverhill, Johnston, and Hodsdon. Acting Physicians-Accoucheur, Drs Dunsmure, jun., and Underhill. Superintendent of Vaccination, Dr Affleck. Diseases of the Ear and Throat, Drs Blair Cunynghame, M'Bride, and Blaikie. Diseases of the Eye, Dr Berry. Diseases of Women, Dr Hart. Clinique daily at 2 P.M. Vaccination on Tuesdays and Fridays from 12 to 1.

**ROYAL ASYLUM FOR THE INSANE**. About 840 patients, about 300 of whom are private patients. Physician, Dr Clouston.

**EYE, EAR, AND THROAT HOSPITAL**, 6 Cambridge Street, Lothian Road, Edinburgh. Consulting Surgeon, Joseph Bell, F.R.C.S. Surgeons, J. J. Kirk Duncanson, M.D., F.R.C.P.E., G. Hunter Mackenzie, M.D., and J. Maxwell Ross, M.A., M.B. Eye Clinique daily at 1 P.M. Ear Clinique on Mondays,

Thursdays, and Saturdays, at 12 noon. Throat Clinique on Tuesdays and Fridays at 12 noon.

EYE DISPENSARY, 54 Cockburn Street. About 2000 patients annually. Surgeons, Mr Walker and Mr Berry. Assistant Surgeon, Mr Caverhill. Open Mondays, Wednesdays, and Fridays, at 1 P.M.

DENTAL HOSPITAL AND SCHOOL, 30 Chambers Street. Consulting Physician, Alexander Peddie, M.D., F.R.C.P.E. Consulting Surgeon, Joseph Bell, F.R.C.S.E. Consulting Dental Surgeon, John Smith, M.D., F.R.C.S.E. Dental Surgeons, Messrs C. Matthew, J. T. Cunningham, W. B. Macleod, M. Finlayson, A. Wilson, G. W. Watson, and M. Macgregor. Assistant Dental Surgeons, E. A. Cormack, W. Forrester, James Cooper, J. S. Durward, James Mackintosh, and James Lindsay. D. W. Bowman Macleod, L.D.S. Edin., Dean and Hon. Treas. James Robertson, Solicitor, 4 Lindsay Place, Edinburgh, General Secretary. Daily, 9 to 10 A.M. Average number of patients, 4500 per annum.

SCHOOL OF MEDICINE, Marshall Street, Nicholson Sq.—See Advertisement.

### GLASGOW.

ROYAL INFIRMARY. 542 Beds. Visit daily at 9 A.M. Dispensary Hour, 2 P.M. Physicians, Drs Maclaren, Scott Orr, Wood Smith, Perry, and Charteris. Surgeons, Drs Morton, Watson, Macewen, Dunlop, and Clark. Gynaecologist, Dr Stirton. Aural Surgeon, Dr Macfie. Dental Surgeon, Dr Woodburn. Dispensary Physicians, Drs Anderson and Dougall. Extra Dispensary Physicians, Drs Middleton, Henderson, Black, and Macphee. Dispensary Surgeons, Dr Lothian and Dr Fleming. Extra Dispensary Surgeons, Drs Barlow, Adams, Muir, and Shaw. Pathologist, Dr Newman. Vaccinator, Robert Tannahill, M.D. M. Thomas, M.D., Superintendent.

WESTERN INFIRMARY. This Hospital contains about 400 Beds for Medical and Surgical patients. There are Wards for Skin Diseases and Diseases of Women, and an out-door Midwifery department. Physicians, W. T. Gairdner, M.D., T. McCall Anderson, M.D., James Finlayson, M.D., Gavin P. Tennent, M.D. Diseases of Women, W. Leishman, M.D. Surgeons, George H. B. Macleod, M.D., George Buchanan, M.D., A. Patterson, M.D., Hector C. Cameron, M.D. Assistant-Physician, Joseph Coats, M.D. Out-door Physicians-Accoucheur, Robert Kirk, M.D., W. L. Reid, M.D., M. Cameron, M.D. Dispensary Physicians, D. C. McVail, M.B., S. Gemmel, M.D., James Christie, M.D. Dispensary Surgeons, D. N. Knox, M.B., J. C. Renton, M.B., Geo. T. Beatson, M.D. Extra Dispensary Physician, William G. Dun, M.D. Extra Dispensary Surgeons, David Newmann, A. G. Maylard, M.S. Pathologist, Joseph Coats, M.D. Pathological Chemist, John Lindsay Steven, M.B. Dispensary Surgeon for Diseases of the Ear, Thomas Barr, M.D. Dental Surgeon, James N. Brownlie, L.D.S. Medical Superintendent, John Alexander, M.D. Lady Superintendent, Miss E. Clyde. Secretary, Henry Johnston, 11 Bothwell Street. The hour of visit is 9 A.M. Operating days, Wednesday and Saturday. The Dispensary for out-patients is open daily at 2 P.M.

LOCK HOSPITAL, 41 Rottenrow Street. 80 Beds. Medical Officers, Drs James Dunlop and A. Patterson. Superintendent, P. Condra. Treasurer, T. D. Findlay. Secretary, Robert Young.

LYING-IN HOSPITAL AND DISPENSARY. 36 Beds; in-patients, 256; out-patients, 1254. Consulting Surgeon, Dr George Buchanan. Consulting Physician, Professor Leishman. Obstetric Physicians, Drs Samuel Sloan and Hugh Miller. Assistant Obstetric Physicians, Drs William Muir and Archibald Sloan. Out-door Physicians, Drs J. Dunlop, T. F. Gilmour, H. B. Wilson, Malcolm Black, James Donald, jun., and John Ritchie.

GLASGOW ROYAL ASYLUM, GARTNAVEL. About 500 patients. Physician-Superintendent, Dr David Yellowlees. Lectures on Mental Diseases during summer, at the University and the Asylum.



**EYE INFIRMARY.** 78 Beds (994 house patients), 12,213 out-patients annually. Senior Surgeon, Thomas Reid, M.D. Surgeons, Thomas S. Meighan, M.D., Henry E. Clark, M.R.C.S. and J. Crawford Renton, M.D. Assistant Surgeons, D. N. Knox, M.B., J. Macfie, M.D., and A. Freeland Fergus, M.B. House Surgeon, A. Maitland Ramsay, M.B. Consulting Surgeon, George Buchanan, M.D. Secretary, George Black.

**DISPENSARY FOR SKIN DISEASES,** 8 Elmbank Street. Physician, Professor M'Call Anderson. Open Mondays and Thursdays at 4 P.M., for out-door patients. This Institution is in connexion with the Wards for Skin Diseases in the Western Infirmary, to which the more important cases are sent.

**OPHTHALMIC INSTITUTION,** 126 West Regent Street. Consulting Physician, Dr S. J. Moore. Acting Surgeon, Dr J. R. Wolfe. Acting Physician, Dr J. S. Cumming. Secretary, Henry Johnston, 11 Bothwell Street. Open daily from 1 to 3 P.M. A Course of Lectures and Clinical Instruction during the Winter and Summer Sessions.

**GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR,** 239-241 Buchanan Street. 12 Beds. Hour of visit to the Hospital, 3 P.M. Out-patients seen at 2 P.M. on Tuesdays, Wednesdays, Thursdays, and Fridays. Number of cases treated annually, 3600. During the Winter and Summer Sessions a Course of Practical Instruction in the Treatment of Ear Disease is given to the Students attending the Clinique. Senior Consulting Physician, Dr P. Stewart. Senior Consulting Surgeon, Dr James Morton. Consulting Dental Surgeon, Dr J. C. Woodburn. Physicians, Drs A. K. Irvine, A. L. Kelly, and J. Gardiner. Surgeon and Lecturer, Dr James Patterson Cassells.

#### ABERDEEN.

**ROYAL INFIRMARY.** Upwards of 250 Beds. Visits daily at 12 o'clock. Physicians, Drs Smith-Shand, Beveridge, and Fraser. Surgeons, Drs A. Ogston, Will, Garden, and Hall. Ophthalmic Surgeon, Dr Davidson. Pathologist, Dr Rodger. Chloroformist, Dr P. Blaikie Smith. Dental Surgeon, Dr Williamson. Treasurer, William Carnie.

**GENERAL DISPENSARY, LYING-IN AND VACCINE INSTITUTION.** 7000 patients annually. Open daily.

**CHILDREN'S HOSPITAL.** Physicians, Drs Stephenson and Garden. Junior Physician, Dr Macgregor. Clinical instruction daily at 11 o'clock.

**LUNATIC ASYLUM.** Above 560 patients. Medical Superintendents, Drs Jamieson and Reid. Treasurer, William Carnie.

**EYE INSTITUTION,** General Dispensary Buildings, Guestrow. Open three days in the week at 2.30 P.M. Clinical Instruction on Diseases of the Eye and the use of the Ophthalmoscope. Average, 600 patients annually.

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#### ARMY MEDICAL DEPARTMENT.

6 WHITEHALL YARD, S.W.

**SCHEDULE OF QUALIFICATIONS NECESSARY FOR CANDIDATES DESIROUS OF OBTAINING COMMISSIONS IN THE ARMY MEDICAL DEPARTMENT.**

1. Every candidate for a commission in the Army Medical Department must be 21 years of age and not over 28 years at the date of commencement of the competitive examination. He must produce an extract from the Register of his birth, or, in default, a declaration, made before a magistrate by one of his parents or guardians, giving his exact age. He must also produce a recommendation from some person of standing in society—not a member of



his own family—to the effect that he is of regular and steady habits, and likely in every respect to prove creditable to the Department if a commission be granted; and also a certificate of moral character from the parochial clergyman, if possible.

2. The candidate must sign a declaration upon honour that both his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, nor has any hereditary tendency thereto, nor any imperfection or disability that can interfere with the efficient discharge of the duties of a medical officer in any climate: also that he does not hold, and has never held, any commission or appointment in the public services. His physical fitness will be determined by a Board of Medical Officers, who are required to certify that his vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it does not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. The Board must also certify that he is free from organic or other disease, and from constitutional weakness, or tendency thereto, or other disability of any kind likely to unfit him for military service in any climate.

3. Certificates of age, registration of diplomas, etc., and of character, must accompany the declaration when signed and returned.

4. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows:—*a.* Anatomy and Physiology, 1000; *b.* Surgery, 1000; *c.* Medicine, including Therapeutics, the Diseases of Women and Children, 1000; *d.* Chemistry and Pharmacy, and a practical knowledge of drugs, 100. [*N.B.*—The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of Medical and Surgical patients at the bedside.] The eligibility of each candidate for the Army Medical Service will be determined by the result of the examination in these subjects only. Examinations will also be held in the following voluntary subjects, for which the maximum number of marks will be—French and German (150 each), 300; Natural Sciences, 300. The knowledge of Modern Languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to *Materia Medica*. The number of marks gained in both the voluntary subjects will be added to the total number of marks obtained by those who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

5. After passing this examination, every qualified candidate will be required to attend one course of practical instruction at the Army Medical School as a probationer on—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service.

6. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact, and they will be required to provide themselves with uniform, viz., the regulation undress and mess uniform of a surgeon, but without sword.

7. They will be required to attend the A. M. D. Mess at Netley, and to conform to the Rules and Regulations thereof.

*The following Extracts regarding "First Appointments" and "Rank and Pay," from the Royal Warrant of 11th March 1882, are republished for the information of Candidates for Commissions in the Army Medical Department.*

#### FIRST APPOINTMENTS.

Every candidate for appointment to the Medical ranks of the Army Medi-

cal Department shall possess two diplomas or licenses, recognised by the General Medical Council, one to practise Medicine, and the other Surgery, and shall be registered under the Medical Act in force in the United Kingdom at the time of his appointment.

A public and open competition shall be held twice in the year for the admission of qualified candidates as probationers. The number of appointments so competed for shall be not less than half of the number of vacancies which shall have arisen in the last completed half-year ending on the 30th June or 31st December.

Not less than half the number of vacancies shall be filled up by competition, and it shall be competent for our Secretary of State to fill up the remaining number from such qualified candidates as may be proposed by the governing bodies of Public Schools of Medicine in our United Kingdom or in our Colonies as he may think proper. Every candidate so proposed shall be certified by the governing body proposing him to be duly qualified according to a standard to be laid down by our Secretary of State, and shall be approved by the Director-General.

Our Secretary of State shall from time to time fix the order of precedence and the proportion in which the several Schools of Medicine shall be offered the nomination of candidates.

A Surgeon on probation shall on appointment be sent to some large station for instruction in Ambulance and Hospital Corps duties, until the commencement of the next course of study at the Army Medical School. After passing through such course at the Army Medical School as our Secretary of State shall decide, the Surgeon on probation, after passing a qualifying examination in the military medical subjects taught there, and satisfying the Director-General that he is a person of proper skill, knowledge, and character, for permanent appointment in the Army Medical Department, shall be commissioned as Surgeon.

The Surgeons on probation who pass out of the Army Medical School at one qualifying examination shall take precedence among each other as Surgeons, as follows:—(a.) Those appointed on nomination according to their date of joining on probation. (b.) Those appointed on competition according to the last day of the competitive examination, and in the order of merit at such examination, with priority over any joining under sub-section (a) on the last day of the competitive examination.

A Surgeon's commission shall bear the date of the day of his passing out of the Army Medical School.

#### RANK AND PAY.

The ranks and daily rates of pay of the officers of the Army Medical Department shall be as follows:—Surgeon-General £2, 15s.; Deputy Surgeon-General, £2; Brigade Surgeon, £1, 10s., after five years in the rank, £1, 13s.; Surgeon-Major, £1, after fifteen years' service £1, 2s. 6d., after twenty years' service £1, 5s., after twenty-five years' service £1, 7s. 6d.; Surgeon, £200 a year, after five years' service £250, after ten years' service 15s. daily. Surgeon on probation 8s. Charge pay: the principal medical officer of an army in the field, consisting of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15s. daily; of less than 5000, 10s. daily. The principal medical officer of a colony where the number of commissioned officers and enlisted men is 1500 and upwards, 5s. daily.

The pay of medical officers shall be issued monthly in arrear.

The relative rank of officers of the Army Medical Department shall be as follows:—I. A Surgeon-General and Director-General shall rank as Major-General. II. A Deputy Surgeon-General shall rank as Colonel. III. A Brigade Surgeon shall rank as Lieutenant-Colonel. IV. A Surgeon-Major shall rank as Major; after twenty years' service as Surgeon-Major he shall rank as Lieutenant-Colonel. V. A Surgeon shall rank as Captain. VI. A Surgeon on probation shall rank as Lieutenant.



### NON-EFFECTIVE PAY.

The daily rates of retired pay or half-pay for Medical Officers shall be as follows :—Surgeon-General, £2. Deputy Surgeon-General, £1, 15s. Brigade Surgeon, under thirty years' service, £1, 7s. 6d.; after thirty years, £1, 10s. Surgeon-Major, after twenty years, £1; twenty-five years, £1, 2s. 6d.; after thirty years, £1, 5s. Surgeon or Surgeon-Major, under five years, 6s.; after five years, 8s.; after ten years, 10s.; after fifteen years, 13s. 6d.

## ARMY MEDICAL SCHOOL.

### ROYAL VICTORIA HOSPITAL, NETLEY.

*President of the Senate.*—T. Crawford, M.D., Director-General of the Army Medical Department.

*Members of the Senate.*—Sir J. Fayrer, M.D., K.C.S.I., F.R.S., Physician to the Council of India; Surgeon-General T. Longmore, C.B., Professor of Military Surgery; Surgeon-General W. C. Maclean, M.D., C.B., Professor of Military Medicine; William Aitken, M.D., F.R.S., Professor of Pathology; F. S. B. F. De Chaumont, M.D., F.R.C.S.E., F.R.S., Surgeon-Major, Professor of Military Hygiene; The Principal Medical Officer, Royal Victoria Hospital, Netley.

*Assistant Professors.*—Surgeons-Major William Cherry, W. R. Tobin, T. R. Lewis, M.B., and Sandford Moore, M.B.

Candidates for Commissions in the Army, and in the Queen's Indian Service, proceed to Netley after passing the Examination at London. At Netley they attend the Medical and Surgical Practice of the Royal Victoria Hospital, and learn the system and arrangements of Military Hospitals. During four months they attend the lectures given by the Professors and Assistant-Professors, and go through a course of practical instruction in the Hygienic Laboratory and Microscopical Room. The lectures and practical instruction are intended to explain the specialities of Military Medical Practice, attention being directed to gunshot and other wounds, surgical arrangements in the field during action and sieges, means of transport, field hospitals, tropical diseases and their means of investigation, service in India and in the various colonies, the sanitary arrangements in peace and war, and the means of carrying out the sanitary regulations. Every opportunity is taken of practising operations on the dead body, and practical points of a like kind.

## INDIAN MEDICAL SERVICE.

### REGULATIONS FOR THE EXAMINATION OF CANDIDATES FOR THE APPOINTMENT OF SURGEON IN HER MAJESTY'S INDIAN MEDICAL SERVICE.

1. *Limits of Age.*—All natural-born subjects of Her Majesty, between 22 and 28 years of age at the date of the examination, and of sound bodily health, may be Candidates. They may be married or unmarried. They must possess a Diploma in Surgery, or a license to practise it, as well as a Degree in Medicine, or a license to practise it in Great Britain or Ireland.

2. *Declaration to be submitted.*—They must subscribe and send in to the Military Secretary, India Office, Westminster, so as to reach that address at least a fortnight before the date fixed for the Examination, a declaration according to a prescribed form.

3. This declaration must be accompanied by the following documents :—

a. *Proof of age*, either by extract from the register of the parish in which the Candidate was born, or, where such extract is unattainable, by his own declaration (pursuant to the Act 5 & 6 Will. 4, c. 62), form of which can be obtained at the India Office. A certificate of baptism which does not afford proof of age will be useless.



b. *A certificate of moral character* from a magistrate, or a minister of the religious denomination to which the Candidate belongs, who has personally known him for at least the two years preceding the date of his application.

c. *A certificate of registration*, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licenses possessed by the Candidate.

4. *Physical Examination*.—The physical fitness of Candidates will be determined previous to examination by a Board of Medical Officers, who are required to certify that the Candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed.

Every Candidate must also be free from organic disease of other organs, and from constitutional weakness, or other disability likely to unfit him for military service in India.

5. *Subjects for Examination*.—On producing the foregoing qualifications, the Candidate will be examined by the examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows :—

|  | Marks. |
|--|--------|
| a. Anatomy and Physiology, . . . . .   | 1000   |
| b. Surgery, . . . . .  | 1000   |
| c. Medicine, including Therapeutics, the Diseases of Women and Children, . . . . . | 1000   |
| d. Chemistry and Pharmacy, and a practical knowledge of Drugs, . . . . .           | 100    |

(The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.)

6. The eligibility of each Candidate for the Indian Medical Service will be determined by the result of the examinations in these subjects only.

7. *Voluntary Examination*.—Candidates who desire it will be examined in French, German, and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to *Materia Medica*.

8. The number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by Candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

9. The maximum number of marks allotted to the voluntary subjects will be as follows :—

|  |     |
|--|-----|
| French, German, and Hindustani (150 each), . . . . . | 450 |
| Natural Science, . . . . .                           | 300 |

10. *Text-Books*.—The subjects for this part of the examination will be taken from the following books :—

*Animal Kingdom*, by W. S. Dallas, F.L.S.

*Outlines of the Structure and Functions of the Animal Kingdom*, by Rymer Jones; or *Cours Élémentaire d'Histoire Naturelle*, par Milne Edwards.

Lindley's *School Botany*, Lindley's *Medical and Economic Botany*, Henfrey's *Elementary Course of Botany*.

*Elements of Natural Philosophy*, by Golding Bird and C. Brooks.

*Physical Geography*, by Mrs Somerville.

11. The Examiners in London will prepare a list in order of merit, with the marks affixed in the different subjects, to be transmitted to the Director-General and communicated to the Professors of the Army Medical School. If any Candidate is found to be deficient in any particular subject, this shall be stated, in order that he may receive special instruction on the point at Netley.

12. *Course at Netley*.—After passing this preliminary examination, Candidates

will be required to attend one entire course of practical instruction at the Army Medical School, before being admitted to examination for a commission, on—

- (1.) Hygiene.
- (2.) Clinical and Military Medicine.
- (3.) Clinical and Military Surgery.
- (4.) Pathology of Diseases and Injuries incident to Military Service.

These courses are to be of not less than four months' duration; but Candidates who have already gone through a course at Netley as Candidates for the Army or Navy Medical Service may, if thought desirable, be exempted from attending the School a second time.

13. *Pay and Uniform while at Netley.*—During the period of his residence at the Army Medical School, each Candidate will receive an allowance of 8s. per diem with quarters, or, when quarters are not provided, with the usual lodging and fuel and light allowances of subalterns, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the regulation undress uniform of a Surgeon of the British Service, but without the sword).

14. All Candidates will be required to conform to such rules of discipline as the Senate may from time to time enact.

15. *Examination at Netley.*—At the conclusion of the course, Candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School.

The Director-General, or any Medical Officer deputed by him, may be present and take part in the examination. If the Candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical Officer, he will be eligible for a Commission as Surgeon.

16. *Position on List of Surgeons, how determined.*—The position of the Candidates on the list of Surgeons will be determined by the combined results of the preliminary and of the final examinations, and, so far as the requirements of the service will permit, they will have the choice of Presidency in India according to their position in that list.

#### INDIA OFFICE, August 1882.

*N.B.*—The examinations for admission to the Indian Medical Service usually take place twice a year, viz., in February and in August.

#### MEMORANDUM REGARDING THE POSITION OF MEDICAL OFFICERS TO BE APPOINTED TO HER MAJESTY'S INDIAN FORCES.

*India Office, February 1882.*

1. The regulations are those in force at the present time. They are subject to any alteration that may be determined on.

2. *Passage to India.*—Passage allowance to India on appointment will be given, or a passage provided. When passages are provided on board the Indian troop-ships, a charge for messing will be made at the rate laid down in the Royal Passage Warrant of 1st April 1879—viz., 2s. a day. Wine and beer are not included in the mess, but when provided are charged for as extras.

3. All Surgeons who shall neglect or refuse to proceed to India under the orders of the Secretary of State for India within two months from the date of leaving Netley, will be considered as having forfeited their appointment, unless special circumstances shall justify a departure from this regulation.

4. *Pay previous to Embarkation.*—Pay at the rate of 10s. a day will be allowed from date of passing final examination at the Army Medical School, until date of embarkation when a passage is provided, or for a period of two months when the Surgeon is permitted to make his own arrangements for passage. An advance of two months' pay will also be made on embarkation.

5. *Grades and Relative Rank.*—The grades of Medical Officers in the Indian Military Forces are six in number, viz. :—

1. Surgeon-General, ranking as Major-General, according to the date of his commission.
2. Deputy Surgeon-General, as Colonel, according to the date of his commission.
3. Brigade Surgeon, as Lieutenant-Colonel, according to the date of his commission, or according to the date upon which he completed twenty years' service as Surgeon and Surgeon-Major.
4. Surgeon-Major, as Major, according to the date of his commission; and after twenty years' service as Surgeon and Surgeon-Major, as Lieutenant-Colonel.
5. Surgeon, as Captain, according to the date of his commission.
6. Surgeon on probation, as Lieutenant.
6. *Promotion*.—A Surgeon is promoted to Surgeon-Major on completion of twelve years' service from date of first commission.
7. In cases, however, of emergency, or when the good of the service renders such alteration desirable, it is competent for the Secretary of State for India, on the recommendation of the Viceroy and Governor-General of India in Council, to shorten the period of service above mentioned, in such manner as he shall deem fit and expedient.
8. All promotion from the rank of Surgeon-Major to that of Brigade Surgeon, from the rank of Brigade Surgeon to that of Deputy Surgeon-General, and from the rank of Deputy Surgeon-General to that of Surgeon-General, is given by selection for ability and merit.
9. On appointment as Honorary Physician or Honorary Surgeon to Her Majesty, an officer below the rank of Deputy Surgeon-General shall be promoted to that rank.
10. Time passed on half-pay will in no case be reckoned as service in calculating claims for promotion.
11. *Tenure of Office in Administrative Grades*.—The tenure of office of Surgeons-General and Deputy Surgeons-General is limited to five years.
12. Deputy Surgeons-General, if not disqualified by age, are eligible either for employment for a second tour of duty in the same grade, or for employment in the higher grade of Surgeon-General by promotion thereto.
13. Absence on leave in excess of six months on medical certificate, or of four months on private affairs, involves forfeiture of appointment.
14. *Pay and Allowances when in India*.—Officers who may hereafter be appointed to the Indian Medical Service will receive pay in India according to the following scale:—

| Rank.                                     | Years' Service. | Pay and Allowances per Mensem. |    |    |
|---|-----------------|--------------------------------|----|----|
|   |                 | R.                             | A. | P. |
| Brigade Surgeon and }<br>Surgeon-Major. } | 25              | 888                            | 12 | 0  |
| " . .                                     | 20              | 852                            | 3  | 7  |
| " . .                                     | 15              | 677                            | 6  | 11 |
| " . .                                     | 12              | 640                            | 14 | 6  |
| Surgeon . . .                             | 10              | 410                            | 9  | 5  |
| " . . .                                   | 6               | 392                            | 5  | 2  |
| " . . .                                   | 5               | 304                            | 14 | 2  |
| " . . .                                   | * under 5       | 286                            | 10 | 0  |

15. On first appointment they will only come into receipt of Indian pay and allowances from the date of their arrival in India.
16. The monthly salaries of the principal administrative and military



appointments are fixed at the following consolidated sums:—Surgeon-General, Bengal, Rs. 2700; Madras, Rs. 2500; Bombay, Rs. 2500; Deputy Surgeon-General, two at Rs. 2250, others Rs. 1800; Brigade Surgeon or Surgeon-Major, of twenty years' service and upwards, in charge of Native regiments, Rs. 1000, with Rs. 90 horse allowance in Cavalry regiments; Brigade Surgeon or Surgeon-Major in charge of Native regiments, Rs. 800, with Rs. 90 horse allowance in Cavalry regiments; Surgeon, above five years' full-pay service, in charge of Native regiments, Rs. 600, with Rs. 60 horse allowance in Cavalry regiments; Surgeon, under five years' full-pay service, in charge of Native regiments, Rs. 450, with Rs. 60 horse allowance in Cavalry regiments.

17. The salaries of other medical appointments in the Civil and Military Departments are consolidated, and vary from Rs. 1800 to Rs. 400 per mensem.

18. Qualified officers of the Medical Service are also eligible for appointments in the Assay Department. The salaries of these appointments are from Rs. 600 to Rs. 2250 per mensem.

19. A medical officer will, however employed, be restricted to the rate of pay laid down in para. 14, until he shall have passed the examination in Hindustani, known as the "Lower Standard."

20. Surgeons-General and Deputy Surgeons-General, on vacating office at the expiration of the five years' tour of duty, will be permitted to draw in India respectively an unemployed salary of Rs. 1200 per mensem in the former, and Rs. 900 in the latter case, for a period of six months from the date of their vacating office, after which they will be placed while unemployed on the following scale of pay:—Surgeon-General, after thirty years' service on full-pay, £2, 5s.; after twenty-five years' service on full-pay, £2, 5s.; after twenty years' service on full-pay, or on promotion should this period of service not be completed, £2; Deputy Surgeon-General, after thirty years' service on full-pay, £1, 14s.; after twenty-five years' service on full-pay, £1, 10s.; after twenty years' service on full-pay, or on promotion should this period of service not be completed, £1, 8s.

21. *Furloughs*.—An officer will be eligible for one year's furlough on the completion of five years' actual service in India, and for an additional year after each subsequent five years' service.

22. While on furlough under the above rule an officer will receive half the emoluments of his office, but will not draw more than £1000 or less than £250 per annum.

23. Upon certificate of a Medical Board, an officer not entitled to furlough, if he has served not less than two years in India, may receive it for any period not exceeding two years.

24. Officers of the Administrative Grades are entitled during their tenure of appointment to six months' leave of absence on sick certificate, or four months' leave on private affairs.

25. *Honours and Rewards*.—Officers of the Indian Medical Service are eligible for the military distinction of the Order of the Bath, and for good service pensions.

26. Six of the most meritorious officers are named Honorary Physicians, and six Honorary Surgeons to Her Majesty.

27. *Retiring Pensions and Half-Pay*.—Officers of the Indian Medical Service will be allowed to retire on the following scale of pension, on completion of the required periods of service:—After thirty years' service for pension, £700; after twenty-five years' service for pension, £500; after twenty years' service for pension, £365; after seventeen years' service for pension, £292.

28. Time of service for pension will reckon from date of arrival in India, and will include furlough taken under the rules referred to in par. 21. The period of residence at the Army Medical School will also reckon as service for the above pension, except in the cases of officers who have gone through the course at Netley as candidates for the British Army or Navy Medical Service.

29. A Surgeon-General, after five years' active employment in India in that grade, will be entitled to retire upon a pension of £350 per annum, in addition to that to which he may be entitled under the above scale.

30. A Deputy Surgeon-General will, after five years' active employment in India in that grade, be entitled to retire upon a pension of £250 per annum, in addition to the pension to which he may be entitled under the above scale.

31. In each of the above cases stated in paras. 29 and 30, six months' absence on medical certificate will be allowed to count towards actual service in those grades.

32. A Surgeon-General or Deputy Surgeon-General who has completed his term of service and has reverted to British pay, may reside in Europe, at the same time qualifying for higher pension.

33. With a view to maintain the efficiency of the service, all medical officers of the rank of Brigade Surgeon and Surgeon-Major shall be placed on the Retired List when they shall have attained the age of fifty-five years, and all Surgeons-General and Deputy Surgeons-General when they shall have attained the age of sixty years. In any special case, where it would appear to be for the good of the service that the officer should continue in employment, he may be so continued, subject in each case to the sanction of the Secretary of State for India in Council.

34. A medical officer retiring after a service of twenty years and upwards may, if recommended for the same by the Government of his Presidency, receive a step of honorary rank, but without any consequent increase of pay.

35. Medical officers not entitled to pension, but who, at the expiration of two years' leave of absence on medical certificate, are unfit to return to duty, will be placed on temporary or permanent half-pay, after examination by the Medical Board at the India Office. The half-pay granted in such a case will be the British rate of half-pay of the relative rank held by the officer :—Brigade Surgeon or Surgeon-Major of twenty years' service ranking with Lieutenant-Colonel, 11s. per day; Surgeon-Major, ranking with Major, 9s. 6d. per day; Surgeon, ranking with Captain, 7s. per day. Officers cannot retire *in India* on half-pay (No. 54, 28th February 1865).

36. The period passed on half-pay will in no case be reckoned as service in calculating claims for promotion or to pension on retirement.

37. *Wound Pensions.*—Medical officers are entitled to the same allowances granted to Her Majesty's Indian Military Forces on account of wounds and injuries received in action as combatant officers holding the same relative rank.

38. *Family Pensions.*—The claims to pension of widows and families of medical officers shall be treated under the provisions of such Royal Warrant regulating the grant of pensions to the widows and families of British officers as may be in force at the time being. (The Royal Warrant of 25th June 1881 is the one now in force.)

39. The widows and families of medical officers are also entitled to pensions from the Indian Service Family Pension Fund, to which all Surgeons must, as a condition of their appointment, subscribe from the date of their arrival in India.

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## NAVY MEDICAL DEPARTMENT.

*Admiralty, 44 Spring Gardens, London, S. W.*

### REGULATIONS FOR ENTRY OF CANDIDATES FOR COMMISSIONS IN THE MEDICAL DEPARTMENT OF THE ROYAL NAVY.

1. Every candidate for admission into the Medical Department of the Royal Navy must be not under 21 nor over 28 years of age on the day on which he presents himself for examination. He must produce an extract from the register of the date of his birth; or, in default, a declaration made before a magistrate, from one of his parents or other near relative, stating the date of birth. He must also produce a certificate of moral character, and a recommendation signed by a clergyman or magistrate to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated.



2. He must be registered, under the Medical Act in force at the time of his appointment, as possessing two diplomas or licenses recognised by the General Council, one to practise medicine and the other surgery in Great Britain and Ireland.

3. He must sign a declaration that he is a British subject, the son of parents of unmixed European blood; that he labours under no mental or constitutional disease or weakness, or any other imperfection or disability which may interfere with the most efficient discharge of the duties of a medical officer in any climate; and that he does not hold, and has never held, any commission or appointment in the public services.

He must also declare his readiness to engage for general service at home or abroad as required.

He must be free from organic or other disease, and his physical fitness will be determined by a board of medical officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test types.

The certificates of registration, character, and age must accompany the declaration, which is to be filled up and returned as soon as possible, addressed as above.

4. Candidates will be examined in the following subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of Drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of Surgical Apparatus, and the examination of Medical and Surgical patients at the bedside.)

The eligibility of each candidate will be determined by the result of the examinations in these subjects only.

Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to *Materia Medica*, also in French and German; and their position on the list of successful competitors will be improved by the number of marks gained in Natural Science and Modern Languages.

5. Every candidate, immediately after passing this examination, will receive a Commission as a Surgeon in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

The full and half-pay per day of Naval Medical Officers is in accordance with the following scale:—**FULL-PAY:** Surgeon—On entry, 11s. 6d.; after 4 years' full-pay service, 13s. 6d.; after 8 ditto, 15s. 6d. Staff Surgeon—On promotion, £1, 1s.; after 4 years' full-pay service in rank, £1, 4s. Fleet Surgeon—On promotion, £1, 7s.; after 4 years' full-pay service in rank, £1, 10s.; after 8 ditto, £1, 13s. Deputy Inspector General, £2, 2s. Inspector General, £2, 15s. On first appointment to the service, medical officers will receive full pay from date of appointment, but subject to the provisions of Art. 1255, clause 2, of the Queen's Regulations, 1879. **HALF-PAY:** Surgeon—Under 2 years' full-pay service, 6s.; after 2 years' full-pay service, 7s.; after 4 ditto, 8s.; after 6 ditto, 9s.; after 8 ditto, 10s.; after 10 ditto, 11s. Staff Surgeon—On promotion, 12s.; after two years' full-pay service in rank, 13s.; after 4 ditto, 14s.; after 6 ditto, 15s. Fleet Surgeon—On promotion, 17s.; after two years' full-pay service in rank, 18s.; after 4 ditto, 19s.; after 6 ditto, £1. Deputy Inspector General—On promotion, £1, 5s.; after 2 years' full-pay service in rank, £1, 7s.; after 4 ditto, £1, 9s. Inspector General, £1, 18s.

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PRELIMINARY EXAMINATIONS for the DIPLOMAS of the ROYAL COLLEGES of PHYSICIANS and SURGEONS of EDINBURGH, during the Year 1883-84.

1. The *Preliminary Examination in General Education* for the Double Quali-



fication in Medicine and Surgery conferred conjointly by the Royal Colleges of Physicians and Surgeons, and also for the separate Diploma of each College, for October 1883, will embrace the following subjects:—

1. *English Language*, including Grammar and Composition; *English History*; *Modern Geography*.
2. *Arithmetic*, including Vulgar and Decimal Fractions.
3. *Algebra*, up to and including Simple Equations.
4. *Geometry*; First two books of Euclid, or the subjects thereof.
5. *Latin*, including Translation and Grammar.
6. *Elementary Mechanics of Solids and Fluids*, comprising the Elements of Statics, Dynamics, and Hydrostatics. *Note*.—This subject may be passed at any period previous to the first Professional Examination.
7. *Optional Subjects*, of which one only is required to be passed: (1.) *Greek*; (2.) *French*; (3.) *German*.

II. The Examination in *English History* will embrace the period from 1714 to 1815 inclusive; and in *Modern Geography*, the Geography of Great Britain, and the principal Physical Features and Political Divisions of Europe.

In *Latin*, the Books prescribed are Livy, Book I.; and Horace, *Epistles*, Book I. Besides translations from either of these, at the choice of the Candidate, the examination will include grammar, translation of a passage from an unprescribed author, and translation of a passage from English into Latin, the more difficult words being supplied.

In *Greek*, the books prescribed are, Herodotus, Book II., and Euripides, *Medea*. Besides translations from either of these, at the choice of the Candidate, parsing, derivation of English words from Greek, and translation of a passage from English into Greek, are required.

In *French*, the book prescribed is Abou, *La Mère de la Marquise*. Parsing and translation from English into French are also required.

In *German*, the book prescribed is Goethe's *Egmont*. Parsing and translation from English into German are also required.

III. The examinations will be held in the Hall of the College of Physicians, 9 Queen Street, on the following days, beginning each day at 1 P.M.—Saturday, 13th October, and Monday, 15th October, and Tuesday, 16th October, 1883. The subjects of the first day's examination will consist of English, History, Geography, and Latin; of the second day's examination, Arithmetic, Algebra, and Geometry; and of the third day's examination, of Elements of Mechanics, and the optional subjects.

IV. *The Preliminary Examination in General Education during the year 1884* will embrace the following subjects:—

1. *English Language*, including Grammar and Composition; *English History*; *Modern Geography*.
2. *Arithmetic*, including Vulgar and Decimal Fractions.
3. *Algebra*, up to and including Simple Equations.
4. *Geometry*, First two books of Euclid, or the subjects thereof.
5. *Latin*, including Translation and Grammar.
6. *Elementary Mechanics of Solids and Fluids*, comprising the Elements of Statics, Dynamics, and Hydrostatics. *Note*.—The last subject may be passed at any period previous to the first Professional Examination.
7. *Optional Subjects*, of which one only is required to be passed: (1.) *Greek*; (2.) *French*; (3.) *German*.

V. The Examination in *English History* will embrace the period from 1603 to 1714 inclusive; and in *Modern Geography*, the Geography of Great Britain and its dependencies, and the principal Physical Features and Political Divisions of Europe and Asia.

In *Latin*, the books prescribed are Ovid, *Fasti*, Book I.; and Cicero, *De Finibus Bonorum et Malorum*, Books I. and II. Besides translations from either of these, at the choice of the candidate, the examination will include Grammar, translation of a passage from an unprescribed author, and translation of a passage from English into Latin, the more difficult words being supplied.

In *Greek*, the books prescribed are Demosthenes, *De Corona*, first half; Sophocles, *Philoctetes*. Besides translations from either of these, at the choice of the candidate, parsing, derivation of English words from Greek, and translation of a passage from English into Greek, are required.

In *French*, the book prescribed is Souvestre, *Un Philosophe sous les toits*. Parsing and translation from English into French are also required.

In *German*, the book prescribed is Lessing's *Monna von Barnhölm*. Parsing and translation from English into German are also required.

VI. The Examinations during 1884 will be held in the Hall of the College of Physicians, 9 Queen Street, on the following days, beginning each day at 1 P.M.:—Tuesday, April 8th, Wednesday, April 9th, and Thursday, April 10th; Friday, July 4th, Saturday, July 5th, and Monday, July 7th; and on Saturday, October 11th, Monday, October 13th, and Tuesday, October 14th. The subjects of the first day's Examination will consist of English, History, Geography, and Latin; of the second day's Examination, Arithmetic and Algebra; and of the third day's Examination, of Geometry and Elements of Mechanics, and the optional subjects.

VII. Each candidate shall pay a fee of Ten Shillings previous to the examination; and, in the event of his being unsuccessful, he shall pay a fee of Ten Shillings for each subsequent examination at which he is present.

Candidates are required to give their names and pay their fees to the officer of the Royal College of Physicians not less than two days prior to the day of the examination. Candidates at a distance should send their fees by post-office order, which should be made payable to John Broome, Officer, Royal College of Physicians, Edinburgh.

VIII. The examinations will be conducted according to the following regulations:—

1. The competence of the candidate will be ascertained by means of written exercises.

2. Each candidate must fill up a form (to be obtained from the officer) giving his name, place of birth, and an address that will find him by post, distinctly written on it, and specifying the subjects in which he wishes to be examined.

3. The exercises on each of the subjects must, in every case, be written on separate papers; and the candidate must attach his signature to each sheet of his written paper, and on the outside when folded, before giving it in to those who superintend the examination.

4. Books must not be employed, nor may assistance be given by one candidate to another, during the examination. Those who violate this rule shall forfeit their right to a certificate.

5. The decision of the examiners will be intimated to each candidate as soon as possible. Those who pass the examination will receive certificates to that effect. In the case of those who are successful in part of the examination only, the subjects in which they have passed will be recorded, and they will not be again examined in the branch or branches in which they have been successful.

IX. A certificate of having passed all the required subjects of the above examination entitles the possessor, on commencing Medical Study, to be registered as a Medical Student in the form required by the regulations of the General Medical Council, and, provided the candidate passes in three books of Euclid, is also admitted *pro tanto* by the Medical Faculty of the University of Edinburgh as an equivalent for the corresponding subjects of their Preliminary Examination for intending Graduates in Medicine.

A list of Examining Boards in the United Kingdom and in the Colonies, whose certificates are received *pro tanto* by the Royal Colleges, on the recommendation of the General Medical Council, will be found at page 351.



*Frequent inquiries having been made as to the exact nature of the Preliminary Examination for the Diplomas of the Royal Colleges of Physicians and Surgeons of Edinburgh, the Secretaries have supplied the following papers, which were given out at the examinations in 1880 :—*

#### ENGLISH.

The candidate is required :—

1. To write a passage dictated by the examiner, with strict attention to spelling and punctuation.

2. To give the meaning and derivation of at least eight of the following words :—

Transference, Apparition, Subject, Performance, Controversy, Direction, Important, Fugitive, Consolation, Destruction, Eulogy, Triumvirate.

3. To give a grammatical analysis of the following sentence :—

"I may indeed venture to hope that such readers, if they follow me with no unkindly spirit through these pages, may find considerations of real weight and importance, which will solve imaginary difficulties and supply an answer to real objections."

4. To write a short essay on the following subject :—

"Iron, and its useful applications." (The chemistry of the subject not expected.)

[The essay need not exceed half a folio page.]

#### FRENCH.

Translate into English :—

*Ariste.*

Allez, c'est se moquer. Votre femme, entre nous,  
Est, pas vos lâchetés, souveraine sur vous.  
Son pouvoir n'est fondé que sur votre faiblesse ;  
C'est de vous qu'elle prend le titre de maîtresse ;  
Vous-même à ses hauteurs vous vous abandonnez,  
Et vous faites mener en bête par le nez.  
Quoi ! vous ne pouvez pas, voyant comme on vous nomme,  
Vous résoudre une fois à vouloir être un homme,  
A faire condescendre une femme à vos vœux,  
Et prendre assez de cœur pour dire un Je le veux !  
Vous laisserez, sans honte, immoler votre fille  
Aux folles visions qui tiennent la famille,  
Et de tout votre bien revêtir un nigaud,  
Pour six mots de latin qu'il leur fait sonner haut ;  
Un pédant qu'à tout coup votre femme apostrophe  
Du nom de bel esprit et de grand philosophe,  
D'homme qu'en vers galans jamais on n'égalait,  
Et qui n'est, comme on sait, rien moins que tout cela !  
Allez, encore un coup, c'est une moquerie,  
Et votre lâcheté mérite qu'on en rie.

*Chrysale.*

Oui, vous avez raison, et je vois que j'ai tort.  
Allons, il faut enfin montrer un cœur plus fort,  
Mon frère.

2. Conjugate the following verbs : *prendre, voir, vouloir, condescendre, tenir, savoir.*

3. Write out in full the imperative of *se résoudre*.

4. Give the feminine of *garçon, gendre, neveu, cheval, âne, cochon, taureau, coq.*

5. Translate into French :

The simplicity of this rural (*champêtre*) life did me a good of inestimable price, in opening my heart to friendship. Till then I had only known sentiments elevated, but imaginary. The custom of living together in a peaceful state united me tenderly to my cousin William. In a short time I had for him



sentiments more affectionate than those which I had had for my brother, and which have never been effaced.

### GERMAN.

#### 1. Translate into English :—

*Maria (mit ruhiger Hoheit im ganzen Kreise herumsehend).*

Was klagt ihr? Warum weint ihr? Freuen solltet

Ihr euch mit mir, dass meiner Leiden Ziel

Nun endlich naht, dass meine Bande fallen,

Mein Kerker aufgeht, und die frohe Seele sich

Aus Engelsflügeln schwingt zur ew'gen Freiheit.

Da, als ich, in die Macht der stolzen Feindin

Gegeben war, Unwürdiges erdulnd,

Was einer freien, grossen Königin

Micht ziemt, da war es Zeit, um mich zu weinen!

Wohlthätig, heilend naht mir der Tod,

Der ernste Freund! Mit seinen schwarzen Flügeln

Bedeckt er meine Schmach—Den Menschen adelt,

Den tiefstgesunkenen, das letzte Schicksal.

Die Krone fühl' ich weider auf dem Haupt,

Den würd'gen Stolz in meiner edeln Seele!

(Indem sie einige Schritte weiter vortritt.)

Wie? Melvil hier?—Nicht also, edler Sir?

Steht auf! Ihr seid zu eurer Königin

Triumph, zu ihrem Tode nicht gekommen.

#### 2. Give the principal parts (first person singular present and imperfect indicative, and past participle) of *fallen*, *aufgeht*, *schwingt*, *vortritt*, *gekommen*.

#### 3. Decline throughout, *sein schwarze Flügel*.

#### 4. Translate into German :

What o'clock is it? It is late, it is ten o'clock. It is fine weather to-day. It has frozen (*friern*) last night. It was very slippery (*glatt*); a man fell and has broken his leg (*Bein*). What is to be done? Send for the doctor.

### GREEK.

#### I. Translate :—

(*Xenophon, Book III.*)

Ἐνταῦθα ἔμειναν ἡμέρας τρεῖς, καὶ τῶν τερωμένων ἕνεκα, καὶ ἅμα ἐπιτήδεια πολλὰ εἶχον, ἄλευρα, οἶνον, κρυθὰς ἵπποις συμβεβλημένους πολλὰς. ταῦτα δὲ συννηγμένα ἦν τῷ σατραπεύοντι τῆς χώρας. τετάρτῃ δ' ἡμέρᾳ καταβαίνουσιν εἰς τὸ πεδίον. Ἐπεὶ δὲ κατέλαβεν αὐτοὺς Τισσαφέρνης σὺν τῇ δυνάμει, ἐδίδασκε τοὺς Ἕλληνας τῇ ἀνάγκῃ κατασκηνησάει, οὐ πρῶτον εἶδον κώμην, καὶ μὴ πορεύεσθαι ἐτι μαχομένους. πολλοὶ γὰρ ἦσαν ἀπόμαχοι, οἱ τετρωμένοι, καὶ οἱ ἐκείνους φέροντες, καὶ οἱ τῶν φερόντων τὰ ὅπλα δεξάμενοι. Ἐπεὶ δὲ κατεσκήνησαν, καὶ ἐπεχείρησαν αὐτοῖς ἀκροβολίζεσθαι οἱ βάρβαροι πρὸς τὴν κώμην προσιόντες, πολλὴ περιῆσαν οἱ Ἕλληνες. πολλὴ γὰρ διέφερον, ἐκ τῆς χώρας ὁρμῶντας ἀλέξασθαι, ἢ πορευομένους ἐπιούσαι τοῖς πολεμοῖς μάχεσθαι. Ἦνίκα δ' ἦν ἡδὴ δειλὴ ὥρα ἦν ἀπίνεαι τοῖς πολεμοῖς. οὐ ποτε γὰρ μείον ἀπεστρατοπεδεύοντο οἱ βάρβαροι τοῦ Ἑλληνικοῦ ἐξήκοντα σταδίων, φοβούμενοι μὴ τῆς νυκτὸς [οἱ Ἕλληνες] ἐπιθούοντο αὐτοῖς.

Parse ἔμειναν. Parse τετρωμένων. Parse ἄλευρα; from what verb is it derived? Parse συννηγμένους. Parse συννηγμένα; give the first person singular of the second aorist active of this verb. Decline ἡμέρᾳ in the singular, dual, and plural. What English word comes from it? Parse δυνάμει. What English words are derived from it? Parse ἀκροβολίζεσθαι; give its derivation. Parse μείον. Parse ἐπιθούοντο.

#### II. Translate :—

(*Iliad, Book II.*)

Ὅς φάτο, νεικίῳ Ἀγαμέμνονα, ποίμενα λαῶν,  
Θερσίτης· τῷ δ' ὦκα παρίστατο διὸς Ὀδυσσεὺς,  
καὶ μιν ὑπὸ δῖον χαλεπῷ ἥριππε μύθοι.

Θερσίτ' ἀκριτόμυθε, λιγύς περ ἔων ἀγορητής,  
Ἴσχεο, μὴδ' ἔθειλ' οἷος ἐριζέμεναι βασιλεῦσιν.  
Οὐ γὰρ ἐγὼ σέο φημι χειρότερον βροτῶν ἄλλον

Ἐμμεναι, ὅσσοι ἄμ' Ἀτρείδης ὑπὸ Ἴλιον ἦλθον  
 Τῷ οὐκ ἂν βασιλῆας ἀνὰ στόμ' ἔχων ἀγορεύεις,  
 Καὶ σφιν ὀνειδέα τε προφέροισ, νόστον τε φυλάσσοις,  
 Οὐδέ τι πω σάφα ἴδμεν, ὅπως ἔσται τάδε ἔργα,  
 ἥ εἴ, ἢ κακῶς, νοστήσομεν υἷες Ἀχαιῶν.  
 Τῷ, νῦν Ἀτρείδῃ Ἀγαμέμνονι, ποιμένι λαῶν,  
 Ἦσαι ὀνειδίζων, ὅτι οἱ μάλα πολλὰ διδοῦσιν  
 Ἦρωες Δαναοί· σὺ δὲ κερτομέων ἀγορεύεις.

Parse *νεικέων*. Parse *ἀκριτόμυθε*; give its derivation. Parse *ἴδμεν*. Parse *κακῶς*; give the corresponding adjective, and compare it. Parse *νοστήσομεν*. Compare *μάλα*. Parse and compare *πολλὰ*. Parse *ἀγορεύεις*.

### III. Render into Greek the following English passage:—

A dog, carrying meat, was crossing a river. Seeing his own shadow (*σκιά*) on the water, he supposed (*ὑπολαμβάνω*) that it was another dog also carrying (*κατεχῶ*) meat; and, letting go (*αφείς*) his own, he thought (*ορμῶω*) to take that of the other dog, but lost both.

### IV. Give the Greek derivation of the following English words:

Dipsomania, Kleptomania, and Monomania; Zoophyte, Neophyte, Strategy, Economy, Anabaptist, Pædo-baptist, Phonograph, Telephon, Laity, Polytechnic, Panorama, Epitaph, Epigram, Epithet.

[The Candidate, in order to pass, must do all these numbers, and obtain 75 per cent. marks.]

### ARITHMETIC.

*The full work of every question must be given.*

1. Calculate to 5 places of decimals the values of

$$1 + \frac{1}{2} + \frac{1}{2.3} + \frac{1}{2.3.4} + \frac{1}{2.3.4.5} + \frac{1}{2.3.4.5.6};$$

and of the square root of 0.8.

2. Find the values of  $\frac{1\frac{1}{8}}{\frac{7}{8}}$  of  $\frac{1\frac{3}{8}}{1\frac{1}{4}}$  and  $\frac{0.08}{\frac{1.35}{1.2}}$ .

3. How many days from July 14th to October 27th, both inclusive?

4. What sum will increase by £100 in 3 years at 5 per cent. compound interest?

5. A man sells 3 per cents. at 81, and invests the proceeds in 3½ per cents. at 92. What is the percentage alteration of his income from the money?

6. A grocer buys two kinds of tea, one at 2s., the other at 2s. 6d. per pound. In what proportion must he mix them, so as to realize 20 per cent. profit by selling at 2s. 9d.?

7. Allowing 64 lbs. of water to a cubic foot, what is the weight of the contents of a bath 70 in. × 37 in. filled to a depth of 19 inches?

8. Show that any integral number of pounds up to 121 can be weighed by means of the five weights, 1, 3, 9, 27, and 81 lbs.

### ALGEBRA.

*The full work of every question must be given.*

1. Find the values of:

$$\frac{(ly - mx)^2 + (mz - ny)^2 + (nx - lz)^2 + (lx + my + nz)^2}{l^2 + m^2 + n^2},$$

$$\text{and } (x + y + z)(x - y + z)(x + y - z)(-x + y + z),$$

in their simplest forms.

2. Find the factors of  $x^2 + \frac{1}{x^2} - \left(a + \frac{1}{a}\right)$ .

3. Divide  $1 - 3x^3 + 3x^6 - x^9$  by  $1 - 2x + x^2$ .

4. Extract the square root of

$$(1 + x^2) + 2x(1 + x^2) + 3x^2(1 + x^4) + 4x^3(1 + x^2) + 5x^4.$$

5. Solve the equations:

$$(a) \frac{x-3}{2x-1} \cdot \frac{1+2a}{3+a} = 1.$$

$$(\beta) (x+5)^2 - (6-x)^2 = 33.$$

$$(\gamma) (1+x+x^2)^2 - (1-x+x^2)^2 = 10(x^2+1).$$

6. One pipe can fill a water-barrel in an hour, another can fill it in two hours. The barrel is placed under the first for a certain time, then under the second for an equal time, then under both for the same time, and is filled. What is that time?

7. A, B, and C have each the same number of nuts. A gives B half of his and five more; B then gives C half of what he has and 10 more; C gives A half of what he has and 15 more. Then A has three times as many as at first. How many had each, and how many has he?

#### NATURAL PHILOSOPHY.

1. What is meant by velocity, and how is it measured? Taking the earth's radius as 4000 miles, what is the velocity of bodies at the equator in consequence of the diurnal rotation?

2. Explain the action of a hydraulic press.

3. If a stone be let fall, and three seconds afterwards another be thrown down with a velocity of 100 feet per second, when will it overtake the first?

4. Describe one form of Hydrometer, explain its use, and show how it can be graduated.

5. Why is greater pressure required to burst a small boiler than a large one of the same shape, both being made of the same boiler-plate? Give other illustrations of the same principle.

6. Enunciate the proposition called the "Parallelogram of Forces," and give a satisfactory proof of it.

7. A uniform force stops a train in one minute, and during that time the train runs 300 yards; what was the velocity of the train, and what ratio does the force bear to the weight of the train?

### Part fourth.

#### PERISCOPE.

#### MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

KAVA-KAVA IN ENURESIS.—Dr C. N. Palmer, in the *Therapeutic Gazette* for August, thus speaks of kava-kava, the root of the plant *Piper methysticum*, a native of the South Sea Islands:—"I have succeeded with it in six cases where all ordinary remedies failed me. I have never heard of its being used for that purpose by any other practitioner; hence the publication of results in my hands. I think the results more rapid when it is combined with belladonna; but the cases I mention had been put thoroughly under the influence



of belladonna *alone*, without benefit, previous to the exhibition of kava-kava. In all these cases no general or hygienic means were neglected, and I am satisfied that without specific restraints and precautions no medicinal agent can reasonably be relied upon to break up the habit. But I am inclined to believe that, when administered intelligently, we have in kava-kava a useful aid in keeping beds dry." The root is extensively used in gonorrhœa.

**EUCALYPTUS GLOBULUS IN DIPHTHERIA.**—Dr C. N. Palmer, in the *Therapeutic Gazette* for August, states that he has used the fluid extract of eucalyptus as a topical application in this disease for the past five years, and adds, "In severe cases the undiluted fluid extract may and should be employed; in milder cases, or as convalescence advances, diluted with an equal quantity of glycerine, or even glycerine in excess. It destroys all odour, facilitates the detachment of the deposit, disintegrating it if not too leathery in character, and frequently preventing secondary formation. With its continued use and the thorough disinfection of all receptacles containing expectorated matter, I have never yet seen a case of infection in others exposed to the patient. I do not discover anything which leads me to believe eucalyptus to have any specific action upon diphtheria except by its local action, but in that respect it seems to be all that could be expected or desired. My general treatment is very simple—stimulants to support the patient, regardless of quantity, with tincture of iron, and, later, quinine in moderately full doses, and strongly supportive diet. My use of eucalyptus, as above stated, covers upwards of one hundred cases positively diphtheritic in character, and I find that it helps out wonderfully. It should be applied upon a clean swab every two or three hours."—*The Therapeutic Gazette*, August 1883.

**TREATMENT OF DIABETES MELLITUS WITH PERMANGANATE OF POTASSIUM.**—Massoin claims to have observed frequent good results from the use of permanganate of potassium in diabetes mellitus, and he ascribes the entire action to the manganese, because, according to Laschkewitz, it produces a fatty metamorphosis in the liver, and because in many cases the liver participates, especially in the case of men. Therefore it is these hepatogenic cases, in Massoin's opinion, that are favourably influenced by the manganate (E. Massoin, *Bull. de l'acad. royale de méd. de Belgique*, 1882, xvi., No. 10).—*Therapeutic Gazette*, August 1883.

#### OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

**THE CULTIVATION AND LIFE-HISTORY OF THE RINGWORM FUNGUS.**—Mr Malcolm Morris and Dr Henderson have made a

series of carefully conducted experiments to determine these points. They found that gelatine peptone, as suggested by Koch, but with a larger proportion of gelatine, formed the best medium for cultivation. They think their experiments warrant the following conclusions:—1. That the spores of *Trichophyton tonsurans* grow freely on the surface and in the substance of gelatine peptone at temperatures between 15° and 25° C. 2. That the mycelium only will grow in the substance of the jelly, and that the hyphæ require air to produce conidia. 3. That the branching, septic formation, and fructification are identical with those of *Penicillium*. 4. That spores of the second generation reproduce ringworm on the human skin. 5. That outgrowths resembling “resting spores” appear on some of the filaments.—*Reprint from the Journal of the Royal Microscopical Society.*

**TREATMENT OF ECZEMA IN PRAGUE.**—Dr Morison of Baltimore first reviews the mode of treatment of eczema at Vienna, so as to compare it with the new method initiated by Pick of Prague. The general laws laid down by Hebra in the treatment of eczema were, soothing applications in the acute stage, tar in the dry, and macerating applications in the chronic stages. A patient was powdered with some inert powder until the acute inflammation and moist stage was passed, then tar applied, and a cure accomplished. The efficacious action of tar is generally conceded to be due to the mechanical protection which it affords to the skin, and to its antiseptic qualities. There is so much chance for a mycotic appearance to be engrafted upon the moist stage of eczema, that it is one of the strongest arguments for the application of a drug if it has antiparasitic or antiseptic properties. Recognising to the fullest extent this important property of tar, and being unable to find in any of its derivatives a substitute for it, Professor Pick conceived the idea of supplying its place with some other medicine which also possessed antiparasitic and antiseptic qualities. The patient, in Prague, has immediately wrapped over his diseased parts linen bandages smeared over with unguentum saponis containing five or ten per cent. of salicylic acid. This is applied in any stage, and left *in situ* for a week. After the bandages are applied they are covered with what is known as tricot, and which is manufactured, in various sizes and at small expense, especially for Professor Pick, in England. A patient thus dressed is able to go about his work with no inconvenience to himself and no injury to his clothes. The salicylic acid must be thoroughly well mixed with the soap ointment while warm, and this must be spread, when at about the consistency of butter, evenly upon short linen bandages, which should not be more than one and a half inch broad, and even much narrower when applied to fingers and toes. The ointment should not be thicker than the back of an ordinary table-knife, and should be spread fresh every time it is used. It is well not to



mix up too large a quantity of the ointment, as upon standing it hardens and is more difficult of application. After a week's time the man appears at the hospital, the bandage is removed, and the disease examined. If found necessary, from the still remaining inflammation and induration, a fresh bandage is applied and left on for another week. Then the gelatine, which constitutes the second stage of the treatment, is applied as follows:—A portion of the mass made by dissolving fifty parts of the purest gelatine in one hundred parts of distilled water, and which has been allowed to cool previously, is melted by putting it in a cup and placing the cup in hot water. To this is added, at the time when it is to be used, the required strength of salicylic acid, usually five per cent. When sufficiently cool, this mixture is painted upon the diseased parts with a painter's brush made of bristles. It must be applied evenly and not too thickly. When this is done properly it can be torn from the skin in quite large pieces, and it comes off without pain to the patient or irritation to the disease, and sounds like the tearing of tissue paper. The layer of gelatine is made about as thick as a sheet of writing paper, and after it has dried is gently covered with a minimum quantity of glycerine spread on with the hand. The use of glycerine is found to be necessary to render the gelatine layer pliable and to prevent its contracting, which it would otherwise do with considerable force, sufficient to irritate the skin. It is not practicable to mix the gelatine with the glycerine before it is applied, as this prevents its hardening sufficiently and renders it sticky. A very small quantity of glycerine makes the gelatine, after it has dried upon the skin, quite soft and pliable. With such a gelatine bandage, but seldom is itching felt, the diseased parts are seen through the transparent layer, and an ordinary bath removes all traces of it. There is no reason why the medicated gelatine should not be immediately applied in any cases of eczema at any stage, but experience has shown that salicylic acid first applied, in the moist stage of acute eczema, in the form of salicylicated soap ointment, for a period long enough to reduce the inflammation, renders the use of medicated gelatine more prompt in its result. Dr Morison gives details of a number of illustrative cases. He says that the most satisfactory, both to patient and physician, are those chronic cases which appear so frequently at dispensaries. The patient is simply bandaged and sent off, to return in a week's time with a most satisfactory issue.—*New York Medical Record*, 28th July 1883.

THE APPLICATION OF MEDICINAL AGENTS TO THE SKIN IN THIN, FIRMLY ADHERENT LAYERS.—Professor Auspitz of Vienna, following the same line of action as Pick, has substituted traumaticine for gelatine. Traumaticine consists of a solution of one part of purified gutta-percha in ten parts of chloroform. This forms an admirable adhesive, and continues unchanged and adherent to the



skin for two or three days, or even longer. On the contrary, in his experience, the layer of gelatine is apt to separate in a few hours, in consequence of friction by the clothes or movements of the limbs, and needs frequent renewal. Again, the traumaticine produces a much thinner and more delicate film than does either collodion or gelatine, and therefore occasions neither tension nor pain. The traumaticine is more readily applied than gelatine; it does not stiffen so quickly, and the brush does not become matted into a stiff mass. The solution in traumaticine is permanent; the gelatine tends to become mouldy, even with the addition of salicylic acid. Psoriasis can be admirably treated with a solution of chrysarobine in traumaticine as follows:—After the chief part of the scales has been removed by means of a simple bath of soap and water, a ten per cent. solution is not only painted on, but rubbed in, with a narrow, short-haired painter's brush, to the patches. The application can be repeated every day, or every second or third day, in proportion to the extent of the disease. A bath is taken after each three or four applications. After at most twelve paintings the infiltration and scales will have disappeared, and in place of them are visible white patches bounded by a red or violet-brown areola. Neither in children nor in adults did any untoward results follow even a very extensive application to the body and face of the chrysarobine-traumaticine. The history of twelve cases is appended, which quite bears out the statement as to the rapidity with which the patches of psoriasis were removed.—*Wiener Medizinische Wochenschrift*, Nos. 30 and 31, 1883.

**DARK SPOTS CAUSED BY THE PEDICULUS PUBIS.**—At a recent meeting of the Société de Biologie, M. Dugué read an interesting communication on the dark-coloured spots on the skin which are caused by the pediculus pubis. Having frequently observed these spots both on diseased and healthy subjects, he arrived at the conclusion that they always denoted the presence of pediculi pubis, but that the pediculi were not necessarily accompanied by the spots. M. Dugué conceived the idea that these spots were the results of inoculation with a specific virus secreted by the parasite. In order to test the correctness of his theory, he pounded a number of the pediculi in a mortar, and by inoculation with their residuum produced an eruption of spots similar to those originally observed. One of his pupils, M. Mallet, had since been engaged for several months completing this investigation in the following manner:—Having torn off the head of one of the animals with a pair of fine forceps, he introduced it under his own skin, the body being inserted in the same way at a point not far distant. Next day a spot made its appearance in the latter situation. After repeating the experiment under every possible condition, these observers concluded that the poison-glands which gave rise to the spot in question were situated in the thoracic region of the

parasite. This agrees with the observation of M. Landois, who has described certain glands as existing on the sides of the œsophagus of the pediculus pubis, and as capable of discharging their contents through the creature's mouth.—*Journal of Cutaneous and Venereal Diseases*, July 1883.

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## PERISCOPE OF OPHTHALMOLOGY.

By GEORGE A. BERRY, M.B.

JEQUIRITY.—Since the introduction by Wecker of the infusion of jequirity bean for the treatment of granular ophthalmia, it has been tried by many in different countries with very various success. Wecker has now given it a very complete trial, and strongly advocates its use. The nature of the ophthalmia produced by this infusion, and which appears to be antagonistic to the granular form, has been very thoroughly studied by Sattler (*Klin. Monatsblätter*, June). His results will, no doubt, bring about a more extensive trial of this curious and interesting drug. The application of the infusion is painless, and it is not until after a period of three hours that the first subjective and objective signs make their appearance, then rapidly increase in severity till about sixteen hours from the time of application, by which time there is developed a severe ophthalmia. If only one application has been made, the inflammation remains in its full intensity for twelve to sixteen hours more, when it gradually subsides. A good, useful infusion is prepared by maceration for twenty-four hours, at the temperature of the room, of the finely-powdered beans (in the proportion of one-half per cent. to one per cent.), deprived of their outer skin. The infusion must be used soon after filtration. By increasing the number of applications, and especially by making them at short intervals (one and a half to two hours), the intensity and duration of the ophthalmia may be considerably increased. By shortening the time of maceration to three to six hours a less severe conjunctivitis is obtained, while, on the other hand, although by no means proportionately, a severer inflammation results from the application of a more concentrated infusion. The action is rendered conspicuously less severe if the infusion has been allowed to stand long before being used, and a similar result is obtained by macerating under a temperature from 33° to 35° C.; while maceration with iced water during twenty-four hours in an ice-safe does not materially affect its action. From experiments on animals, it was found that if the ophthalmia produced by the infusion had left considerable changes in the conjunctiva, the animal was proof against any further application, and even after comparatively unimportant changes, any further application is produced of only slight degrees of conjunctivitis. Prof. Hilger extracted a crystalline substance which Sattler found to be quite devoid of activity; he therefore set him-



self to solve the following questions:—Is there in the infusion a special and constant form of micro-organism, and can the same form be found in the secretions from the inflamed conjunctiva? Can it be shown that the infusion is inactive when the micro-organisms are excluded from it? and, finally, Is it possible to cultivate the spores removed from the infusion, so that after several generations they may still retain their power of producing the characteristic ophthalmia? The microscopic examination of the infusion revealed with the greatest constancy a fungus of the genus bacillus; these, although sometimes appearing immediately after filtration, generally showed themselves after two or three hours only. These organisms were found to be wonderfully tenacious of life—thus they might be dried for two or three weeks without losing their power; they were not killed by remaining two or three minutes in a .01 per cent. solution of corrosive sublimate, and in the dried state they withstood a temperature of 110° C. for five minutes. They require air for their development, as they do not make their appearance if the infusion be tightly corked up after filtration, although it undergoes putrefactive changes. They are to be found, though not generally, in very great numbers in the purulent secretion from the conjunctiva, which explains the fact that inoculation with the pus from a case of jequirity ophthalmia brings about a similar though much less severe conjunctivitis. Experiments were also made with the infusion rendered sterile by prolonged boiling, and kept in flasks stopped with cotton-wool. Such solutions, however, were capable of bringing about a not inconsiderable amount of ophthalmia, but that this was due to the development of the germs in the conjunctival sac was evident from the following:—The ordinary jequirity infusion, when injected under the skin, gives rise to an abscess. Injections were made under the conjunctival fold in rabbits with six different solutions—(1) distilled water, previously boiled; (2) a solution of peptonate of meat extract at the temperature of the body; (3) a fluid containing bacillus subtilis; (4) the test infusion of jequirity, free from organisms; (5) the ordinary infusion of jequirity; (6) a fluid containing the specific bacillus obtained by cultivation. The first four injections produced no effect, whilst the two last were followed by hard swellings in the upper lid, which developed into abscesses. The only other question remaining was whether or not there existed a bacillus with the same morphological properties, capable of giving rise to the characteristic ophthalmia without the intervention of the jequirity infusion? To this question Sattler considered himself compelled to give a decided negative answer. As, besides the fact that he had never found in his many examinations of the secretion from the conjunctiva any similar micro-organism, and, in fact, never any bacilli of any description, but only micrococci and bacteria, he tried a number of preparations of the bacilli, as well as other leguminous infusions in which bacilli made their appearance, always



without any effect. The interesting conclusion to which he comes may best be given in his own words:—"The only possible conclusion to which we are driven is that an apparently widely distributed and in itself harmless bacillus, when its spores come in contact with an infusion of jequirity, acquires a new physiological property, viz., the capability of vegetating in the conjunctiva of the living animal, and by means of a ferment thus produced, so disturbs the tissues of the conjunctiva as to bring about a reaction which gives rise to the clinical appearances of the inflammation known as jequirity ophthalmia."

**CASE OF UNILATERAL ALBUMENURIC RETINITIS.**—The following case, reported by Yvert in the *Recueil d'Ophth.* for March, is of interest from a general as well as special point of view. A man aged 43 was admitted on the 7th of December 1882 into the military hospital of Philippeville under Dr Richard, and died 17th February following. He had a profoundly cachectic appearance, with general anæmia; the urine was found to contain a considerable quantity of muco-pus and albumen. Some days after admission the eyes were examined ophthalmoscopically by Yvert. The right eye was perfectly sound, and remained so till death, while the left exhibited marked and advanced nephritic alterations; along with these was a degree of amblyopia, which varied very much at different times of the illness. The intra-ocular changes were confirmed at the autopsy, when it was also found that there was a complete absence of a right kidney, no vestige of artery, vein, or ureter, and nothing on that side but the suprarenal capsule, occupying its usual place. The left kidney was considerably augmented in volume, presenting double the dimensions of a normal kidney, and weighing 360 grammes. It presented the characteristic appearances of parenchymatous nephritis. Yvert refers to five cases published by Professor Potain in the number of the *Gazette des Hopitaux* for the 17th February, in which the contusion of one kidney was followed by an anæmia in all cases much more marked on the injured side. Taking these with his own cases, he puts forward the view that any irritation proceeding from one kidney is capable of acting through the sympathetic on the whole capillary system of the corresponding side, bringing about circulatory disturbances as well in the retina as elsewhere.

**ON THE APPARENT SIZE OF AFTER-IMAGES, ETC.**—It had for long been known that the negative after-image of any object varied in size according to the distance from the eye of the plane on which it was projected; and it was shown by Emmert that the exact relation between the sizes of object and after-image was expressed by the formula  $N = \frac{O \cdot D}{d}$ , where  $N$  = size of after-image,  $O$  = size of object, and  $D$  and  $d$  = their respective distances from the eye. This may be easily verified. Zehender showed, however, that if the visual axes did not meet on the inter-

posed surface on which the after-image was projected, the size of the image did not correspond to the distance of that plane from the eye, but to the distance for which the axes of vision converged. He also showed that the apparent size was independent of accommodation. The degree of convergence alone, then, appears to determine the size of the projected after-image. Mayerhausen (*Graefe's Archiv*, vol. xxix. 2, p. 23) has recently estimated the apparent size of after-images of objects of different sizes and at different distances with the eyes closed, and, from the results obtained, drawn some interesting conclusions as to the positions of the eyes under the closed lids. The principal results of his experiments were as follows:—(1.) With the eyes closed the diameter of the after-image (the objects used were white discs on black velvet) appeared greater the nearer the distance at which the object was fixed. (2.) The entoptic after-images of differently-sized objects are for all distances of fixation as the sizes of the objects. (3.) Where the distance of the object fixed is as about 2 metres, its after-image appears to be of about the same size, whilst if fixed at a distance of 30 ctm., the after-image appears about double the size. (4.) The amount of increase of enlargement or diminution of the entoptic after-images is not the same for all distances of fixation of the object, the difference being least between 2 and 3 metres, and increasing in both directions,—most rapidly, however, where the distances are small (the distances experimented with were 5, 4, 3, 2, 1 metres, 50, 40, 30, 20, and 10 ctm.). (5.) It appears from the results of these observations that when awake the eyes are directed under the closed lids towards a point about two metres distant, the exact distance probably varying in different individuals, which position may be looked upon as one of equilibrium of the ocular muscles. (6.) After fixation at other distances, the eyes under the closed lids do not appear to return immediately to this position of equilibrium, but retain a certain quota of the altered muscular innervations which brought them to bear on the object fixed. The point to which they do converge lies farther from the distance of 2 metres from the eyes, the greater has been the convergence or divergence immediately preceding the time at which they are closed.

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## Part Fifth.

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### MEDICAL NEWS.

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UNIVERSITY OF ABERDEEN.—During the past year, the following candidates received degrees in Medicine and Surgery:—The degree of M.D.—John Barrett, M.B., C.M., P. and O. Service; Harry Arthur Benham, M.B., C.M., Dundee Royal Asylum; Algernon Aaron Cohen, M.B., C.M., Burwash, Sussex; Alexander Downie Diack, M.B., C.M., Fort Beaufort, Cape Colony; John Murray Gibbes, M.B., C.M.; Skene Gordon, M.B., C.M., South Africa; Alexander Hill Griffith, M.B., C.M., Royal Eye Hospital, Manchester; Robert Harvey, M.B., C.M., Prof. of Midwifery,



Medical College of Bengal, Honorary Surgeon to H.E. the Viceroy of India; Frederick Mortimer Hawkins, M.B., C.M., London; George Robert MacGregor, M.B., C.M., Bingley; Charles Mitchell MacQuibban, M.B., C.M., Aberdeen; John Ramage, M.B., C.M., British Seamen's Hospital, Cronstadt; William Reid, M.B., C.M., Kensington, London; Charles Boards Richardson, M.B., C.M., Brighton; John Ruxton, M.B., C.M., Blackpool, Lancashire; William Dyne Steel, M.B., C.M., Abergavenny; David Tulloch, M.B., C.M., Winnipeg, Canada; John Michael Augustus Wallis, M.B., C.M., Whittingham, Preston; Charles Lindsay Wattie, M.B., C.M., Inverkindie; Alexander John Willcocks, M.B., C.M., Bulandshaler, N.W.P., India. The degrees of M.B. and C.M.—John Baker, Aberdeen; Robert Milne Beaton, Aberdeen; Alfred Brown, M.A., Welshpool; George Buchan, Aberdeen; Sylvester John Cole, Freetown, Sierra Leone; Henri Cook, Greenock; Alexander Cowley, Dublin; George Forsyth Ashley Da Costa, Kingston, Jamaica; Francis Falconer, M.A., Aberdeen; James Thomson Fraser, Longsight, Manchester; John Gerard, M.A.,<sup>2</sup> Aberdeen; Henry Gibbons, Kurrachee, India; John Gordon, Aberdeen; George Grant, Keith; John Gregory, Bridge of Don; Andrew Hosie, Aberdeen; John Inglis, M.A., Aberdeen; David Ireland,<sup>2</sup> Brechin; Charles Jeffrey, Tarland; George Johnston, Fintray; Thomas Mair, Johnstone, Ellon; Louis Joseph, Colombo, Ceylon; John Bamford Kerr, Crawshawbooth, Manchester; Alexander Walker Knox, Aberdeen; James Logie, Huntly; James Francis Macdonald,<sup>2</sup> Aberfeldy; John Norman Emslie MacLennan, Lumphanan; Cyril James Mansfield, Ryde, Isle of Wight; John Matheson, M.A., Plockton, Ross-shire; Frederic Maude, Highgate, London; John M'Combie, Oxtou, Morayshire; Wm. M'Kenzie, M.A., Fochabers; Grenville Edwin Moffett, Calcutta; Jas. Moir, St Kilda, Victoria; John Drew Moir, St Kilda, Victoria; Wm. Moir, Aberdeen; Jas. Murray, Nairn; Alex. Nicoll, Rhynie; David Petty, Montrose; David Prain, M.A.,<sup>1</sup> Fettercairn; James R. Purdy, Morpeth; Richard Rees, Aberdovey; James Robertson Reid, Aberdeen; Alex. Rennie, M.A.,<sup>2</sup> Wester Fintray; James Taylor Robb, Keith; James Alexander Ross, Aberdeen; William Scott,<sup>2</sup> Auchairn, Keith; John George Scroggie, Aberdeen; William John Henderson Sinclair, Dunbeath, Wick; Alexander Gillespie Smith, M.A., Torphins; James Lawrence Smith, Aberdeen; William Allan Stewart, Buxburn, Newhills; George Cardno Still, Aberdeen; James Struthers, Aberdeen; James Taylor, M.A., New Deer; James Longmore Taylor, M.A., Cullen; Alexander Philip Thom, Durris, Kincardineshire; George John Kemp Turner, Ellon; John Turner, Portsmouth; George Vincent, Bedford, Middlesex; Robert Walford, Colchester; Arthur Meredith Whitehead, Nottingham. At the same time, Charles Alexander Butchart, William Keltly, William Barclay Livermore, Alexander Reid, William Ledingham Ruxton, Arthur Greatorex Smith were certified as having passed all the Examinations, but did not graduate.

ON HERPETIC TONSILLITIS: ITS RELATION TO DIPHTHERIA.—What constitutes diphtheria? is a question frequently asked, but as yet not satisfactorily answered. Professor Pepper of Pennsylvania sets himself to define the distinctions between tonsillitis with membranous exudation, with white submucous deposit in patches, and with erythematous inflammation of the mucous membrane of the uvula and pharynx, without deposit or exudation, and true diphtheria. In doing so he admits that such forms of tonsillitis—all of which are accompanied by constitutional symptoms in the shape of fever and by engorgement of the lymphatic glands in the neighbourhood—may be acquired by persons in close attendance or contact with patients suffering from undoubted diphtheria. And again, he admits the converse, that patients affected with one or other of those forms of tonsillitis which he prefers to call herpetic may without further exposure, and apparently as a further stage of their tonsillitis, exhibit symptoms undistinguishable from what all would class true diphtheria. He thinks that diphtheria may begin as a local affection involving chiefly the tonsils. In some individuals

<sup>1</sup> With highest academical honours.

<sup>2</sup> With honourable distinction.



the disease may remain a local affection, a tonsillitis with membranous exudation, while in others the same disease may give rise to true diphtheria, either from the absorption of a specific bacillus or, as he thinks more probable, from the presence of a peculiar vulnerability to septic infection. This idea guides his treatment, which differs little from that generally advocated for diphtheria, and is tolerably active, for he concludes, "I have never been able to reconcile myself to the propriety of trusting these cases to simple remedies. I always attack them vigorously and get them under control as quickly as possible." He does not seem to be aware of the value of salicylate of soda and salicin internally, and boracic acid and boroglyceride locally, in those forms of tonsillitis and pharyngitis which he admits are, to say the least, closely allied in nature to diphtheria.—*Philadelphia Medical Times*.

NEUROTIC PYREXIA AFTER WITHDRAWAL OF OPIUM.—So constant is the rise in temperature after the habitual narcotic is abandoned, that it forms a trustworthy guide in determining the extent and duration of reflex irritation, which is the source of whatever sequelæ may attend the opiate withdrawal, and it also affords a reliable indication for sedative doses—20 to 30 grs.—of quinine and other agents to control the exalted spinal activity. This thermometric rise usually begins a few hours—varying from six to twenty—after the final dose of opium, rises rapidly as the symptoms of reflex irritability increase, and may reach a maximum of 140°, or even more, remaining at that point, with slight deviation, until the nervous irritation begins to subside, and from that time gradually decreases until, in from ten to forty days, it reaches its normal. During this period of greatest pyretic activity, if a full dose of opium be given, the temperature promptly declines to, or below, the natural standard, to rise several hours later, but seldom reaching the former elevation.—Dr Mattison of Brooklyn, *New England Medical Monthly*.

WHY SOME SUBJECTS ARE STUDIED SO MUCH.—Dr Da Costa has said, "If one has not too much to do, he writes a short paper on phthisis; if one has little to do, he writes a long paper on phthisis; if one has nothing to do, he writes a book on phthisis." The same writer says, "Gynecologists, as a rule, part their hair and their names in the middle, and never die until they have invented pessaries and speculums innumerable."—*N. Y. Medical Record*.

THE curious observation has been made by a French writer, that the initials of the five elements (in their French names) which enter chiefly into the constitution of organic matter, namely Carbone, Hydrogene, Azote, Oxygene, and Soufre, spell CHAOS.

SURGICAL CUTENESS.—An instance of surgical "cuteness" is just recorded from Paris, the subjects of which are those miserable creatures, as stupid as they are ugly, yclept poodles. It has occurred to a veterinarian that by a slight modification of nature's arrangement the poodle's tail can be converted into a convenient

*handle*, wherewith the animal may, as occasion requires, be *lifted* from place to place. He shaves the dog neatly, scarifies the tip of its tail, makes an incision for the reception of the tip beneath the skin of the animal's back a little behind the fore shoulder by means of a transverse cut, then, lifting the dermic tissues with the handle of the scalpel until a sufficient excavation is made, he inserts the tip of the tail in the wound and securely bandages it there. The result is a teapot sort of production that is eminently suggestive of the necessity for an appointment on the part of the Society for the Prevention of Cruelty to Animals.—*London Medical News*.

A MODEST FRIEND TO HUMANITY AND THE MEDICAL SOCIETY OF NEW YORK.—A letter has strayed into our hands addressed "To the Medical Society of New York." The author writes: "Sirs i adress to inform you after all the artful efforts of our smartest men i have selected 9 ingrediences of the vegetations of the Earth to Cure all Manner of Blood Deseases scrofula it never fails in no form or stage privat Deseases of all kinds olde sores or Cifulis and Catarrh of the head or any Desease Caused by impurity of the Blood it also renovates the Stomac bowels and liver Beyornt anything ever got up and Can be established as the greatest Medicen now in the world. . . . Now a reasonable salery will make this great matter known to the Society

"addres Dr \_\_\_\_\_,

"Henry Co. Ky."

—The *N. Y. Medical Record*.

THE annual Commencement of the Woman's Medical College of Pennsylvania was held March 15th. The degree of M.D. was conferred upon thirty-five women.—The *N. Y. Medical Record*.

FROM the Tenth Annual Report of the London Temperance Hospital, it appears that the in-patients admitted and treated during the year were 411, and from the opening of the Hospital 1765. There is also a large and increasing number of out-patients four times a week. The doctors have power to prescribe alcohol as a drug, but have seen no reason to do so, and they regard its absence as tending rather to rapidity of recovery and successful treatment of the most serious diseases. The mortality of the hospital has been from the first extremely low. The accumulative facts and extending experience of the Temperance Hospital cannot fail to produce a powerful effect on the public and private practice of medical men in regard to the use of alcohol even in cases where it has been generally considered essential. There are a large number of statistical tables, but we see no statement of the proportion of recoveries among the abstaining and nonabstaining patients. Such information would be very valuable, and can be obtained hardly anywhere else than in a Temperance Hospital.

## Part First.

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### ORIGINAL COMMUNICATIONS.

#### I.—NOTES OF CASES TREATED IN WARD XIX. OF THE ROYAL INFIRMARY.

Reported by SKENE KEITH, M.B., C.M., Surgeon for Out-patients to the Samaritan Free Hospital, London, and Surgeon to Vincent Square Hospital for the Diseases of Women, Westminster.

*(Continued from page 311.)*

CASE XVI.—Patient, aged 35, from Hawick, was sent by Dr Croom. She was brought into the hospital in a very feeble state. She was tapped a week or ten days before, late at night, at Dr Croom's request. For many months she had been confined to bed in the country, suffering severely, and had required tapping five times. After admission she continued feeble, with a high evening temperature, and pulse ranging from 115 to 130. She was extremely anæmic, with œdema of the limbs, abdominal wall, back, and loins, and the skin over the sacrum threatened to give way. In the course of a fortnight she was twice tapped, about four gallons of thick fluid being removed each time, but the size of the abdomen was now not much lessened by the tapping. She was seen by Professor Annandale and Dr Keiller, for the case almost looked like one in which ovariectomy would not give her a chance, but would simply kill her. Her position was explained to her; of course she could not and was not expected to make up her mind on such a question. She left it to Dr Keith to make up her mind for her. She did not risk much, and he advised her to chance it, as all she could lose was a few weeks of increasing feebleness, and perhaps suffering. Operation was done next morning, the pulse being then 130. It was performed very rapidly, and was a most severe one. The incision was 12 inches. Several of the old tapping points had given way, and were discharging pus from some suppurating cysts. Parietal adhesion was firm, extending all over as high as the ribs; very firm also in both iliac fossæ and in right lumbar region. Here the tumour was almost solid, bulging out the loin and raising the ribs on that side, and even the outside tissues were thickened. The omentum seemed to come in adherent everywhere. The tumour



was friable, and on turning it out it broke off, leaving a large piece adherent to the brim of the pelvis and to the right side and fundus of the uterus. The injury inflicted was very great; the abdomen seemed to be bleeding from every part. The tumour had adhered to the under surface of the liver and extensively to the inside of the ribs, whence copious oozing went on. A large number of points were secured as rapidly as possible, but it was hopeless to tie everything. Her appearance had got so alarming, and she looked so chilled, and everything in the abdomen felt so cold, that the spray was suspended during the latter part of the operation, and the sponges were simply wrung out of hot water. A large drainage-tube was left in, and she was put to bed, looking more dead than alive. Whisky was injected into the rectum, and she slowly got into heat. Six hours after operation, perhaps from too many hot bags, the temp. had risen to  $102^{\circ}$ ; eight hours after, to  $104^{\circ}$ . The pulse was then 160–170, scarcely perceptible. She looked then as if about to die from hæmorrhage; the lips and tongue were quite bloodless, the eyes were sunken, and respiration very laboured. There was much blood on the sponges, and in addition 4 ounces of pure blood were removed from the pelvis. I scarcely expected to find her alive at midnight, but she was not worse, though the pulse could not be counted. *Second day.*—Had some sleep towards morning with morphia. Temp. has fallen to  $102^{\circ}$ , pulse 160, but was almost imperceptible. There was some vomiting during the day. Whisky was given freely both by mouth and rectum. In the evening 8 ounces of dark bloody serum were got away from the pelvis. Her expression was better, a little colour in the face; pulse now distinct at 154. *Third day.*—Nearly 4 ounces of thick syrupy blood from pelvis; some pain, soothed by opium; pulse 144. *Fourth day.*—Only 3 ounces of syrupy blood from tube; pulse 134. *Seventh day.*—Tube removed; only a little clear yellow serum; pulse 104. A rapid convalescence followed.

CASE XIX.—A healthy young woman, 30 years of age, sent by Dr Perry. It was a case of burst cyst, and the operation was quite simple. The fluid in the peritoneum was very viscid, and much sponging was necessary. The operation was done in the large theatre, and the spray apparatus was placed very close to the patient on account of the currents of air in the theatre. The intestines were red and granular. The operation was quite simple, and there were no adhesions. She was apparently quite well on the third day, when Dr Keith left town. That afternoon there were some convulsions, and she died with the symptoms of uræmic poisoning. The body was examined by Dr Hamilton with great care, but he could give no opinion as to the cause of death. There was not a trace of disease anywhere. The brain and every organ were quite healthy. The kidneys were noticed as being con-

gested, but no special examination was made of them, as it was then supposed that some evidence of septicæmia would be found. The most remarkable thing noticed was the extreme dryness of every part of the body. The peritoneum, which a few days before contained much fluid, and which was so granular and red, was now quite pale, and did not hold a single drop of fluid. The case was altogether a most unsatisfactory one. Recovery was looked upon as certain, and no notes of the pulse or temperature were taken after the convulsions, and the patient was dead almost before any alarm was taken. It was not till after the death of the next patient that it was supposed that carbolic acid might have been the cause of the fatal issue.

CASE XX.—A married woman, rather delicate-looking, from Coupar-Angus, was tapped twice in the Perth Infirmary. She was long in regaining strength after the first tapping. Operation on the 15th November, in the large theatre. The spray apparatus was again placed closer to the patient than usual. The currents made by the opening and shutting of the gallery doors made this necessary. The cyst was very firmly adherent in front to the wall and to the omentum, most of which was so torn that it was cut away. On removing the cyst there were seen very extensive adhesions to the small intestine and mesentery. About 6 inches of small intestine had to be separated by very careful dissection. This lengthened out the time of operation to one hour and a quarter. A very thin pedicle was secured by carbolized silk ligatures. A drainage-tube was left in. This case was very carefully watched, and the state of the urine was especially noticed. On the second morning, as there were only two drachms of almost clear serum from the tube, it was removed. On the third morning there was no albumen in the urine, of which there were 21 ounces during the night. She seemed quite well, and flatus was passing freely; pulse and temperature about normal. The evening urine contained one-half albumen, with a quantity of blood. The night was restless, and the pulse had run up to 130; temperature 100°. On the fifth morning, after another restless night, there were passed 12 ounces of a sort of thick syrupy blood, and the same in smaller quantities during the day. The temperature was 99°·6, but the pulse was feebler. The abdomen was hollow, flatus passing freely. She took food and stimulants in any quantity. On the sixth day there was almost no urine passed, only a very little of what seemed almost pure blood. She was slightly confused, and died next morning comatose, six days after operation. Unfortunately no examination could be obtained.

CASE XXI.—A delicate woman, aged 46, was operated on on 2nd December. There were extensive parietal adhesions—the operation lasting forty minutes. The weight of the tumour was 32 lbs. There was no rise of pulse or temperature. On the third



morning ten ounces of bloody urine, with some clots, were passed. Temp. rose to 99°, and pulse to 94. Till now it had not been above 80. By evening the urine was even more bloody. On the fourth day pulse was 72, temp. 98°6; the urine not nearly so bloody. On the fifth day there was no blood, but one-third albumen. On the sixth day there was again much blood. On the seventh day there was no blood, but one-fifth albumen. On the eighth day there was jaundice, which had nearly disappeared by the thirteenth day. The albumen disappeared on the eleventh day. She left the hospital twenty-two days after operation. Since these cases, operations in the large theatre were discontinued, and carbolic spray was definitely abandoned.

CASE XXVI.—Patient, aged 30, sent by Dr Somerville of Gala-shiels. Three months before, was confined to bed for a month on account of great pain in the abdomen. The tumour was very hard, and the umbilicus was retracted, as is generally seen in case of small uterine fibroids. There was no doubt, however, of its being ovarian. There were extensive parietal adhesions, and to many folds of small intestine. The tumour was broken into, but could not be reduced, and had to be removed entire. It seemed to be composed almost entirely of the stroma of the ovary, and there were scarcely any cysts. The pedicle was unusually broad, vascular, and short. It was divided by the cautery. Recovery was rapid.

CASE XXVII.—Patient, aged 47, was sent by Dr Gairdner of Crieff. She had been confined to bed several months, suffering severely. She was anæmic, feeble-looking, and ill, and on admission was suffering much pain. The tongue was dry and red, and there was a high evening temperature. She was tapped—the contents of the cyst being purulent. Operation, on 26th April, lasted one hour and twenty minutes. Adhesions were universal and of the firmest description, and were remarkable for their vascularity, especially those to the small intestine. The bladder was drawn up in front of the tumour. The cyst was also adherent to the uterus and pelvis. There was no pedicle. It was full of pus and masses of old fibrine and clot. A drainage-tube was left in. There was free discharge from the tube for some days, but recovery was rapid, and she went home twenty-three days after operation.

CASE XXX.—Aged 49. Girth at umbilicus 56 inches; tumour also hanging down over the thighs. She had been tapped eight times in the country before she was seen by Dr M'Leod of Hawick, who sent her in, expressing the hope that the case was not too late for operation. She was in the last stage of the disease. The tumour was very large, very adherent; the legs swollen to the bursting point; hands and feet cold and blue; pulse about 120. She was extremely emaciated. She was tapped after admission, to relieve



the general tension. A huge, prominent, semi-solid tumour was left. There were upwards of four gallons removed; it was the ninth tapping. Her chances seemed small. She was advised to run the risk. She had not much to lose, and she might gain much. Operation, a few days after, lasted one hour and ten minutes. The whole omentum was spread over the tumour, and firmly adherent to it and to the wall; in the right lumbar region, to the mesentery behind, and in the pelvis. About thirty ligatures were left in. She was drained. The weight of the tumour was 70 lbs. Convalescence was very slow on account of the extreme condition of feebleness. The pulse and temperature remained high for three weeks without any apparent cause. She was unable to go home for seven weeks.

CASE XXXIV.—An unmarried teacher from Wooler was operated on on 27th July. There was fluid in the peritoneum, outside an ovarian tumour. There was also fluid in both pleural cavities. There was some recent adhesion. The tumour was papillomatous. Recovery was easy, and the fluid had disappeared from both pleuras when she left the hospital.

CASE XXXVI.—Sent by Dr Cahill of Berwick. The patient was 55 years of age, weak and anæmic; evening temperature  $100^{\circ}$  to  $102^{\circ}$ . Operation on 26th August. The tumour was friable and semi-solid. It was broken up. Some of the fluid escaped into the pelvis. There were adhesions to the wall, omentum, small intestine, and in the pelvis. There was no pedicle, the broad ligament being opened up by the tumour, all bleeding points being tied as divided. The operation was tedious, from difficulty in checking pelvic hæmorrhage. A drainage-tube was left in, and removed four days after, 46 oz. of red serum having been collected during that time. There was no rise of pulse or temperature, and recovery was rapid.

CASE XXXIX.—Aged 49; sent by Dr Hume of Kelso. She was tapped in Feb. 1881. She was a very fat woman, and there was so much serous infiltration of the abdominal wall that no correct diagnosis could be made; 46 lbs. of clear fluid were removed. She got into good health, but again increased in size. There was no doubt as to the diagnosis on her return for operation. The cervix was drawn upwards, and the tumour descended into the left side of the pelvis. There were nearly four inches of fat in the abdominal wall. The operation was extremely troublesome. The solid mass was large, and there were very extensive adhesions to intestine and mesentery. There was no pedicle, the tumour having opened up the left broad ligament down to the very bottom of the pelvis. Enucleation was difficult; many ligatures were required, and part of the uterus was included in the ligatures. The weight of the tumour was upwards of 50 lbs. A drainage-tube was left

in, from which there was free discharge of almost pure blood during the two days it was allowed to remain. She had not a bad symptom, and was out of bed fourteen days after operation.

CASE XLI. — Patient, aged 27, had observed the abdomen swollen since the birth of her last child, five months ago. Two months ago was admitted into Dr Angus Macdonald's ward, where she was tapped, a few pints only being removed. This was followed by pain and fever, which disappeared on emptying the cyst three weeks after the first tapping. The cyst rapidly filled, when she was transferred for operation. She was nervous and sleepless, and not in a good state for operation. The cyst was tense, and she was, moreover, weakened by a profuse monthly period. Operation on 12th November, lasting a little over an hour. There were intimate and firm adhesions to the whole wall, also to the omentum, and extensive posterior adhesions to the mesentery. A number of bleeding points in the mesentery were tied, and it was then observed that the mesenteric arteries were pulsating very rapidly. A very thin pedicle was ligatured; and as there was a good deal of oozing from the abdominal wall, and the patient showed signs of feebleness, a drainage-tube was put in and the wound closed. When put to bed the pulse was 170. Dr Keith saw her again before leaving the hospital, and again three hours after. The pulse was still 170, the first sound almost gone; but she was comfortably warm, and said she felt well. At 9 P.M., nine hours after operation, the pulse was 168. The aspect was good, and there was gentle perspiration. Only four ounces of reddish serum from the tube. Six ounces of urine were passed by the patient. The night was restless, the patient being disturbed by a colony of cats outside the building. In the morning she looked well and was cheerful. Twelve ounces of urine were passed, and three and a half ounces of red serum from the tube. There was some windy pain. The pulse had fallen to 160; the respirations were 20; temp.  $100^{\circ}2$ . As the day went on there was some sickness from flatulence, but flatus soon passed freely. In the evening the pulse was 156; temp.  $101^{\circ}2$ . Two and a half ounces of pale reddish serum from the tube, and the sickness had passed off. Nutrient enemata were given regularly, but much, indeed almost any, stimulant, was badly born; even a small quantity of brandy seemed only to drive the heart faster, and to weaken it. The second night was also restless. Flatus had passed freely, and the abdomen was soft and flat. Pulse 156; temperature  $101^{\circ}4$ ; respirations 18. The heart was much more feeble. She died sixty-one hours after operation. An hour before her death a little pale red serum was removed from the bottom of the pelvis. It contained only some red and white blood-cells. It was most carefully examined, but there was not a trace of organism of any kind.



The body was examined by Dr Hamilton thirty hours after death. No trace of decomposition. A heart-clot was expected, but the cavities were quite empty, and the heart tissue quite soft. The heart was small. There was no serum in the pelvis, and no peritonitis, the omentum only being adherent to the wall where adhesions had been separated at the operation. Here and there in the upper part of the abdomen small separate quantities of red serum—only a teaspoonful here and there. The body was much emaciated. Dr Hamilton believed the case to be one of death from exhaustion. Dr Keith was, however, unwilling to admit death from simple exhaustion sixty hours after operation, and thought that probably there was some septic element in the case, even though from the hour of the operation there was much doubt as to the result. Probably under different conditions the result might have been different, and he regretted not having given the patient another tapping, and waiting till her strength was made up. The operation was done rather in a hurry, before having become acquainted with the patient and her ways. She was depressed at the time, desponding and nervous, having slept badly for several nights, and weakened by a profuse menstruation. All this was not known till afterwards.

CASE XLII.—Aged 39. Had not been small in the abdomen since the birth of her last child. She was suffering severely, when admitted, with acute œdema of the limbs and abdominal wall. She was two months pregnant. The day after admission 450 ounces of ovarian fluid were removed by puncture. She was much relieved. The cyst began to show signs of rapid refilling, and it was removed ten days after the tapping. All the pelvic organs were intensely red, and the tissues of the broad ligament felt soft and spongy. A vessel bled on removing the cautery clamp. This was again applied close to the pregnant uterus; but, after all, two bleeding points required ligature. They seemed to arise from tears in the swollen tissue below the edge of the clamp. There was not a single bad symptom, and pregnancy went on without disturbance.

CASE XLIV.—This patient was transferred for operation from Professor Fraser's wards. She was 21 years of age, and could speak only Gaelic. She was from one of the Western Islands. A year ago she began to enlarge, and her appearance excited suspicion. Notwithstanding that menstruation was regular, little charity was shown to her. She was pronounced to be pregnant, and after a time was simply put out. After some months, when her size had become enormous, and when her legs had split in several places from excessive œdema and pressure, a doctor was got to see her, and 6 gallons of fluid were removed. She was very ill and weak for a month. After a second tapping, she was sent off by steamer, consigned to a grocer in the Grassmarket, who sent her to the hospital, where she was again tapped. There was a large tumour



left. Ovariectomy was performed on the 22nd of March. There were numerous adhesions. The weight of the tumour was 63 lbs. There was no rise of temperature, but the pulse was rapid and feeble for many days. Convalescence was slow. She declined to return home, having retained too vivid a remembrance of her sufferings and of the want of charity among her own people. One of those "good and honourable women" who labour in the Infirmary took care of her, and is teaching her English, till she be able to do for herself.

CASE XLIX.—An unmarried Irishwoman, 46 years of age, was sent by Dr Dunlop of Co. Antrim. She had a small multilocular ovarian tumour. In addition to this, there was a small lump, generally covered by intestine, felt deeply under the liver, the nature of which it was difficult to define. It was not connected to the tumour, nor did it seem to be the kidney, though deep pressure in the loin sometimes seemed to push it slightly forwards. After removal of the ovarian tumour, this other tumour was seen to be the end of an elongated, clear, thin-walled cyst projecting from the under surface of the liver. It had no connexion with the gall-bladder, but arose from the body of the liver. It was not interfered with, neither was it examined too curiously. It might have been punctured; it could not have been removed, neither could it have been opened and attached to the wall. It caused no trouble during the rapid convalescence that followed.

CASE LII.—A poor Irishwoman, aged 41, was sent by Dr Whiteford of Greenock, and was first admitted in June. She arrived at the hospital so prostrated after the journey that she seemed to be in a dying state. She was cold, blue, and almost pulseless. So she lay for two days, taking no notice of anything. As operation seemed to be out of the question, her friends took her home, and it was a relief to hear that she did not die on the way. No examination whatever was made of the tumour, but it was large, and there was no tension. She had already been tapped three times. After getting home she improved, and was tapped a fourth time by Dr Whiteford, and shortly after a fifth time—the quantity of fluid removed on each occasion being 10 quarts. Dr Whiteford was very good to her; he supplied her with strong food, with tonics, with malt extracts, and with everything that his kind-heartedness could suggest. About this time Dr Keith happened to be in Greenock, and he was taken by Dr Whiteford to see her. She was sitting up, and was much improved; so she was had back again for operation on the 18th September. Dr Whiteford was present. There were bands in front, and some close adhesion to the wall. Some semi-solid tumour filled the pelvis, tied down by some bands. On withdrawing the tumour there was an unsuspected solid mass that came from under the ribs, and which pressed high up against the diaphragm. It was the size of an

adult head. Doubtless the pressure of this portion upon the heart explained the feebleness of pulse and the state of collapse of three months before. After operation the pulse got stronger every day, and convalescence was uninterrupted.

CASE LX.—A young married woman, aged 28, was sent by Dr Wilson of Greenock. During her last pregnancy she suffered severely, and was a great size. Before her confinement she had much breathlessness. Three weeks after her confinement she was tapped by Dr Wilson and Dr Whiteford, and was admitted a fortnight after. She had not been out of bed for many weeks. She arrived in a state of great exhaustion, with a feeble, rapid pulse, and breathing badly. There was œdema of the legs and of the abdominal wall, extending as high as the sternum. There was considerable chronic pneumonia of the right lung. Two days after admission 400 ounces of fluid were removed by tapping, and the tumour was reduced by one-half. The œdema of the wall remained, however, and it had not entirely subsided till three weeks after the tapping. Her breathing was relieved, though her general condition was very bad. The pulse kept about 120; evening temp. about 102°. She was weak, troubled with cough; her stomach was irritable; sometimes she was sick, and would take no food, and sometimes she had diarrhœa. After a dose of male fern, great quantities of tape-worm were passed, and she slowly improved. The chest cleared and her appetite returned. She was kept two months in hospital, well nursed and well fed. The time came when tapping would again be required, and she seemed now to have gained all that it was possible for her to gain. It was thought better to propose the removal of the tumour. This was done on the 24th of February. The incision was 12 inches; the wall was very vascular, and many arteries spouted freely. The hard mass extending from the sternum to below the umbilicus was firmly adherent, as was expected from the long continuance of the œdema after the tapping. The omentum was so adherent that it was cut away. The whole pelvic portion of the tumour was also adherent. Upwards of 30 catgut ligatures and 5 of silk were left inside, and the wound was closed by 19 sutures. As the bleeding had entirely ceased, no drainage-tube was left in, though the amount of separated adhesion was unusual. This was afterwards regretted. For the first week recovery seemed hopeless. The pulse was rarely under 130, though the temperature was not at any time high. There was much distention, and the attacks of pain were unusually severe, requiring much morphia. Flatus passed with difficulty. There was much vomiting, and at one time the vomited matter seemed to be stercoraceous. Fortunately she bore stimulants well. After the first week there was some improvement, but recovery was slow. She returned home, after more than three months' residence in the Infirmary, freed of all her troubles.



To these may be added a case of hysterectomy with double ovariectomy. The uterus was natural in size, but the two ovarian tumours were large, and so completely incorporated were they with the uterus that neither could be removed entirely without also taking the uterus with them. The operation was one of great difficulty. It was performed under a 10 per cent. solution of boro-glyceride spray, but it did not prevent the blood-poison from doing its deadly work. For long all spray had been given up, but last year, during the time that repairs were going on in the corridor close to the ward on account of dry rot, there was so much dust in the room that it could not be kept clean for half an hour. The boro-glyceride spray was only used in this and in one other case of hysterectomy. It seems equally inert with carbolic spray in preventing septicæmia, at least when used in the form of spray.

Mrs S., aged 48, sent by Dr Spence of Burntisland. She was one of the first patients admitted, nearly two years before. The local difficulties were so great that she was at once advised against interference, and was recommended to be satisfied with what relief tapping from time to time gave. In all she was tapped nine times, and her general health kept wonderfully good. But she had come and gone to the ward so often, and had seen so many go away well after operation, that she was unwilling to relinquish the hope that she too might have a chance given her. Her repeated request was reluctantly agreed to, and, after much difficulty from pelvic adhesions and the matting together of both tumours with the uterus, the operation was completed, but the uterus was also removed. As much of the lacerated tissue of the broad ligaments and top of the vagina were brought outside and secured by a clamp. She passed an excellent night, and thirty-four hours after operation was extremely well, the temperature being only  $98^{\circ}4$ . She awoke in the second night out of a heavy sleep, feeling strange and faint. Towards morning sudden vomiting set in, and she died of rapid septicæmia sixty-six hours after operation.

#### TEN CASES OF REMOVAL OF THE UTERUS AT THE VAGINAL JUNCTION.

A very large number of cases of fibrous tumours of the uterus came or were sent for operation. In the following cases only was operation advised. In these cases interference seemed to be justifiable, either from the great size which the tumours had attained, or from the amount of hæmorrhage that was going on in others, thus rendering their lives burdensome and useless. The first seven of these have been already published in *Brit. Med. Jour.*, January 1883.

CASE VIII.—An unmarried dressmaker, aged 50, from Glasgow, was sent by Dr Maddever of Rothesay. She had been aware of the existence of a large uterine fibroid for more than ten years, and



had for long looked forward to the menopause, when she understood that all her troubles would cease. Instead of that, she began to get more uncomfortable; for some months past increase of size has been steady, and of late great pain has been felt over the region of the liver, from pressure upwards of the tumour. She was admitted on the 19th of November last. On examination there was found to be a large uterine fibroid, and, in addition, a large ovarian tumour occupying the upper part of the abdomen, pushing the ribs outwards. The ovarian tumour was most distinct on the right side, where the loin was bulged outwards, and the ribs on that side were more elevated than those on the other. 240 ounces of thick fluid were removed from this tumour; and on puncturing another cyst, the contents were found to be thick jelly, and this cyst could not be emptied. Very great relief followed these punctures, and for a few weeks she felt quite well. She again rapidly filled, and there was a return of the old sufferings.

It was agreed to remove the ovarian tumour if possible, and then to be guided by circumstances what to do with the fibroid. There was no cervix whatever, so that it was doubtful whether the fibrous tumour could be removed or not. On the 28th December the ovarian tumour was again tense. An incision ten inches in length was made from near the ensiform cartilage downwards to a little below the umbilicus. The ovarian tumour was tapped, broken up, and withdrawn. Its pedicle was long, and lay adherent to the fibrous tumour for about nine inches. As the tumour was withdrawn this was partly separated from the fibroid. On searching for the opposite ovary it could not be brought into view, and what felt to be the ovary was a tumour the size of the fist away deep down in the pelvis. The incision was then enlarged downwards and the fibrous tumour turned out. Wires were placed round the top of the vagina, and the stump fixed outside along with both broad ligaments. There was great tension. Fortunately the distention of the wall was so great that this was able to be accomplished. The weight of the ovarian tumour was 15 lbs., that of the fibroid was 20 lbs. There were no unfavourable symptoms. The highest temperature reached was 101°, and that only once, on the third day; the highest pulse was 104 at the same time. The wound was not even looked at till the seventh day, when everything about the stump was quite dry and the wound all healed. The slough separated on the sixteenth day, and the upper end of the vagina was opened into—the hole being the size of a sixpence. The whole uterus was removed. Its cavity measured nine inches.

CASE IX.—An unmarried woman, aged 30, from Shetland, was sent in March by Dr Hanson of Lerwick. She had a bleeding fibroid which had been noticed two years ago. It reached to the umbilicus, and occupied the left side of the abdomen more than

the right. It came pretty low into the pelvic cavity. There was a distinct cervix. The sound entered eight inches. From the small size of the tumour the case seemed to be one in which the removal of the ovaries alone might answer the purpose of checking the hæmorrhages and reducing the size of the tumour, but at the operation this was found to be impossible—the right ovary could have been removed, but it was impossible to reach the left, and the closeness of its connexion to the tumour would have made this impossible, even could it have been got at, without first turning out the tumour. The incision was enlarged and the tumour was withdrawn. The left broad ligament rose high on it. It was separated off and ligatured. The right was included in an enormous clamp along with the neck of the tumour. The mass included was large and the tension excessive. The operation lasted one hour and ten minutes. There were no unfavourable symptoms. The temp. only once reached  $100^{\circ}$ , and that was on the night of the operation. The highest pulse was 84. The wound was not looked at till the eleventh day after operation. It was dressed with salicylic wool. The cavity left, after separation of the clamp on the fourteenth day, was large and deep. The wound was almost cicatrized when she went to the convalescent house six weeks after operation.

CASE X.—An unmarried woman, aged 38, from Sutherland, was sent by Dr Soutar of Golspie, in May 1883. Tumour reached to the umbilicus. Menstruation was profuse, and the tumour was growing rapidly. The uterine cavity was seven and a half inches. The tumour came low into the pelvis. It was intended, as in the previous case, to remove the ovaries. Only one of these could be got at. It was very much enlarged and full of cysts. The other ovary could not be reached. There was much difficulty in getting the tumour outside, but by hard pulling and pushing upwards from the vagina it was at last accomplished. In doing this there was some posterior laceration of the tumour, and the removal of it was now essential. The pelvis was very broad, and the patient was a large, very fat woman, so that when the tumour was brought outside, the tension on the broad ligaments, which rose high up, was so great that there seemed to be risk of their giving way. These were separated off the tumour. This relieved the tension and enabled the tumour to be completely brought up and fixed in the wound with a large clamp. There was an unusual amount of pain complained of for several days after operation, and she required much morphia. The highest temp. noted was  $100^{\circ}2$ , and that only once, on the evening of the second day, when the pulse was 94, the highest point that it reached during her convalescence. Examination of the tumour, after its removal, showed that only one-third of it was covered by peritoneum, the broad ligaments having embraced nearly the whole of it.

Another case might here be added, as the operation in no way



differed from the others, except that the cavity of the uterus was not opened. The tumour was operated on as a case of fibroid. It was in reality a case of interstitial pregnancy at the full time. The foetus had remained in its bed for more than four years, and two years before operation a child was born alive at the full time. The sufferings of the woman had all along been, and continued to be, great, and it was in the hope of giving relief to the excessive pain that operation was advised. A healthy uterus and a healthy ovary were left. Recovery was rapid, and pain ceased with the operation.

It would be easy to add many other cases of equally severe operations; but enough has been said to give a fair idea of the work done. Considering the nature of the cases operated on, the mortality is not great; and though the numbers be not large they help to swell the crowd who year after year go away from the Infirmary cured of their diseases.

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## II.—EXTRA-UTERINE GESTATION.

By WILLIAM ALEXANDER FREUND, Professor of Midwifery in the University of Strassburg, Honorary Fellow of the Obstetrical Society, Strassburg.

(Translated from a German communication to Professor Simpson, by David Smart, M.B., Buchanan Scholar, and read to the Edinburgh Obstetrical Society, 27th June 1883.)

(Continued from page 251.)

CASE VI.—Mrs E. The following anamnesis was taken on 24th May 1881. The patient, who is 40 years of age, very feeble, has since her seventeenth year been annoyed with pains. She has twice had normal deliveries, the last fourteen years ago,—puerperia normal. In the beginning of April her menstruation stopped.

Pains, general discomfort, and some abdominal fulness, strengthened the patient in the belief that she was pregnant. For the last six weeks she has felt ill, weak—suffering from pains, ischuria, and frequent vomiting.

On 23rd May urinary troubles appeared; these and intense abdominal pains, frequent desire to go to stool, feelings of heat and distressing thirst, compelled the woman to keep her bed. For the past fourteen days a somewhat hæmorrhagic discharge has been oozing from her genitals. During the night of the 23rd the woman awoke, after a short restless slumber, with fearful pains in her distended abdomen, intense vomiting, ischuria, and soon complete retention of urine. During an attack of pain she jumped out of bed and fell in a swoon to the floor. She was brought to the hospital on the morning of the 24th. Here we had to combat for the next few days the very serious symptoms of anæmia and peritonitis. The breasts were rich in colostrum, and in the most



dependent part of the abdomen free effusion. High, remitting fever, urine free from albumen, much uric acid.

On the 1st June we discovered in front of the uterus (which was flattened, swollen, twice its normal size, and admitting the finger-tip) an elastic ovoid tumour, about the size of a child's fist, which appeared adherent to the neighbouring parts, and which became smaller and firmer during the next three weeks. On 17th June the woman was discharged, having day by day improved in her general health. The uterus lay retroverted and fixed to the posterior pelvic wall. In front and above it lay a sausage-shaped tumour, about the thickness of the thumb, which could be traced to the left corner of the uterus, and which appeared adherent to the adjacent parts.

CASE VII.—Mrs S., with unimportant family history, regular since her fourteenth year, but always pained. After a forceps labour with a normal puerperium (twenty-seventh year), the menses were less painful. Five years ago she was treated for severe pains in the right iliac region. On 21st September the woman (now 34 years old) menstruated, and on 29th October an oozing of blood, with slight abdominal pains, which lasted till her admission into hospital (10th November 1881), appeared. At first a skinny white shred, partly covered with fluid blood, was expelled. Severe pains now set in in the abdomen and loins, shooting along the right side into the shoulders, and on 7th November a fainting fit took place. Since this time she has suffered also from painful micturition, amounting to at times complete retention. Along with this the signs of pregnancy, already observed in September, became more marked, especially the swelling of the breasts. There was found on examination an elastic tumour on the right side of the pelvis to the side of the uterus, which was about 12 centimetres long, flattened, patulous, elevated, and pushed forwards to the left. The tumour was sausage-shaped, and could be traced from above in front and without, passing in a downward, backward, and inward direction obliquely through the pelvis to the bottom of the pouch of Douglas. Its distinct junction to the right angle of the fundus, its shape and position, along with the clinical phenomena, enabled us to recognise it as the right tube which lodged an ovum destroyed through hæmorrhage, with marked distension and slight rupture of the sac.

The clinical symptoms pointed to the rupture of the sac, as also the slight but distinct doughy resistance of the lower end of the tumour in the pouch of Douglas. The case was under uninterrupted observation from 20th December 1881 until 11th February 1882, during which time there occurred sudden swelling and hardening of the tumour (due to a new hæmorrhage into the sac), effusion of fluid into the pouch of Douglas, exudation into the surrounding parts, accompanied by severe pains and moderate

fever. From this time the uterus and tumour regularly decreased in size, the latter became harder and more uneven, the breasts became smaller, but still contained colostrum; her general health improved, and the woman was sent home in February 1882 at her own request. In May 1882, being again admitted, the woman stated that in March last she had passed thick, bloody, purulent-like masses from her vagina and rectum after a preceding severe effort at stool. We found the uterus firmly contracted, drawn backwards, and fixed to the right posterior part of the pelvis. In place of the former tumour a cicatricial mass, which fills up the right broad ligament, and lies upon the right fornix vaginae; in this we recognised a cicatrix running from behind downwards and outwards. In the rectum we could reach above the sphincter tertius on the anterior wall, and to the right side a rough thickened part, which was firmly adherent to the cicatricial mass in the right side of the pelvis. There had undoubtedly occurred perforation and emptying of the sac through the rectum and vagina.

CASE VIII.—Mrs P., 27 years old, had borne her fourth child normally seven months ago, and had been quite healthy from then till the present time. The menses were absent in the beginning of May 1882, and signs of pregnancy appeared, with disturbance of general health. About six weeks after the first disappearance of the menses severe pelvic pains with fainting set in without any apparent cause, at the same time a slight amount of bloody discharge showed itself. After some days the woman recovered from this attack; however the tenderness on pressure and swelling of the abdomen remained for the next few days. About twenty days after the first attack a second followed, decidedly more severe, with greater flow of blood. On 2nd June 1882 I found the woman feverish and very anæmic, the rounded open uterus, about double its normal size, pressed forwards and to the left against the anterior pelvic wall by an elongated swelling, about twice the size of the fist, occupying the right side of the pelvis and right inguinal region, as far as above Poupart's ligament. On the floor of the pouch of Douglas doughy masses, the left broad ligament markedly thickened; colostrum in the mammæ. It was taken to be a case of rupture of a right tubal pregnancy. Along with remitting fever a large pelvic peritonitic exudation took place, which, placed round the pelvic organs, consolidated, and with severe attacks of fever, became purulent here and there, and burst through partly into the rectum and partly into the bladder. After gradual diminution of the pelvic exudation, which interfered with the action of the bladder and rectum most distressingly, a new swelling appeared in the end of the year, especially on the left side of the pelvis. According to the statement of the house physician in February 1883, an encapsuled exudation, extending to-



wards the left wall of the pelvis, was opened and drained, whereupon her health was said to have improved.

CASE IX.—Mrs L., aged 23 ; full time child when twenty years old ; abortion in October 1881, which was followed by parametritis ; pregnant since July 1882. She enjoyed good health up to November, when she began to suffer from symptoms of peritonitis, with severe pain, specially in the left hypogastric region, debility, and persistent vomiting. Extra-uterine gestation was diagnosed. In December 1882 I found a tumour about the size of a child's head ; it was almost round, elastic, somewhat irregular, adherent to the surroundings, slightly sensitive on pressure. The uterus was pushed to the right and forwards, slightly enlarged and somewhat patulous, the tumour coming close up to its left side. Above this tumour one could hear a souffle quite distinctly synchronous with the patient's pulse, but no foetal heart sounds ; further neither could foetal movements (which patient said she had felt) nor parts of a child be demonstrated. On 10th January 1883 the house physician applied a weak current of electricity to the tumour, after which the patient perceived no more movements ; at all events, she is at present perfectly well. The tumour, which we must consider as the sac of an abdominal gestation, has become markedly smaller and firmer, and can be felt adherent to the left of the uterus.

CASE X.—Mrs S., aged 23 ; married one year and a half, always regular, but with some dysmenorrhœa ; menstruated last end of January 1883. Up to 16th March there was no special disturbance, except nausea, discomfort, and marked constipation. At this date there came on an attack of acute pain, marked swelling of the abdomen, and vomiting. About four weeks afterwards there followed a second attack with feverishness, great weakness, rapid pulse, persistent vomiting. The diagnosis was peritonitis, probably resulting from extra-uterine gestation. In the end of April, after the symptoms had abated and the abdomen become collapsed, we recognised a flat rounded tumour in the right inguinal region. In the beginning of May the peritonitic symptoms came on more markedly, and on 3rd May, after the patient had made a railway journey of several hours, I found general peritonitis, with free fluid in both lumbar regions and pelvis. In the right inguinal region a rounded tumour, about the size of the fist. The uterus was pushed to the left side of the pelvis and forwards, the pouch of Douglas bulged markedly towards the vagina and rectum, a little colostrum in the breasts. In the next few days the patient's condition improved generally and locally with the discharge of stinking masses of dark blood clots through an opening about the size of the finger, just above the sphincter tertius. The patient became feverish, and died 17th May with high fever and symptoms of exhaustion. Unfortunately a post-mortem examination was not allowed to confirm our diagnosis of a right-sided tubal gestation.



CASE XI.—Mrs F. consulted me in March 1877, complaining of an acrid leucorrhœa from the genitals, and produced a number of small bones which, during the last half year, had been passed from time to time per vaginam. She is 42, somewhat overworked, but otherwise healthy, and says that after four normal labours she believed she was in the family way again ten years ago. The pregnancy continued for five months without marked disturbance of health, at least without interfering with her arduous occupation as wife of a poor labourer. After this time she had hæmorrhage from the vagina, which lasted four weeks with slight abdominal pain, and then the symptoms of pregnancy gradually disappeared. She had at this time no medical treatment. One and a half years ago she became again pregnant, and nine months ago, at full time, was delivered of a fully developed, dead child, which came as a footling presentation, and was extracted with difficulty by the midwife. During the puerperium, severe, troublesome pain in the back, dyschezia, and protracted, bloodstained discharge took place. Six months ago a fragment of bone was expelled from the vagina, and others after a time. At present she suffers from continuous down-bearing and acrid leucorrhœa, and her husband complains also of certain discomforts. The patient made the correct diagnosis that there were more bones to come away. I removed from a fistulous opening in the right fornix, after the necessary dilatation, fifteen bones of a rather more than five months' fœtus, viz., most of the ribs and all the bones of the head. These were removed from a sac which occupied the pouch of Douglas, and which could be traced upward and to the right as far as the right iliac fossa. The uterus was thin-walled, and was to the front and left side. The anamnesis of this case was only obtained after thorough questioning and long consideration on the part of the patient, who only indistinctly remembered this affair protracted over ten years.

We had here to do with a clear case of extra-uterine gestation. Three weeks after the removal of the remains of the fœtus the uterus was found fixed to its lower posterior surface to the back wall of the pelvis. Its left appendages were distinctly felt; its right were found covered with thick, fibrous bands.

CASE XII.—Mrs S. (this case resembled the last, and for the preparations from it I am indebted to the kindness of a professional brother in Alsace) had three children; natural labours, the last in 1871. The strong countrywoman could remember of no illness until the normal arrival of her fourth child on 20th July 1873. The house physician gave me the following report of the birth and subsequent occurrence:—The child was alive and a large one, with face presentation, and was brought into the world with some trouble by means of the forceps. On the 1st August the patient fevered and began to show symptoms of "perimetritis with hæmatocele." Severe diarrhœa appeared towards the end of the month. On 30th

August Dr Bochoben reached a bone through an opening in the anterior rectal wall, and removed a rib. Out of a pouch between the rectum and uterus he removed, during the next ten days, the bones of a foetal skeleton, partly bare and partly covered with decaying soft parts. The woman felt much better after this, completely recovered, and since then had a natural labour.

Only a few ribs of the whole skeleton of a six months' foetus were wanting in the bones that were given me.

B. To the second group belong those cases where the pregnancy went on to full time.

CASE I.—Mrs R., 46 years old in 1875, had had five normal deliveries, and puerperia also normal. When a year and a half ago her menses stopped, and digestive troubles, obstinate constipation alternating with severe diarrhoea, sleeplessness, and general weakness appeared, the woman was of the opinion that she was either pregnant or had reached the critical period of life. Along with increasing troubles her abdomen began to swell, just like a pregnancy, and vague pains in the loin and left side made their appearance. No information could be got whether movements of the child were felt. During the last half year the woman had become very weak through irregular febrile attacks, pain in the abdomen, and diarrhoea. When, in October 1875, the woman came under observation suffering from remittent fever, she presented such a high degree of exhaustion, that the examination of the distended abdomen could not be made with the necessary care without chloroform. We could only discover chronic peritonitis with free exudation, and a firm nodulated tumour, which distended the pouch of Douglas behind and close to the thin-walled uterus, and rose as high as the navel. The tumour bulged into the rectum; the projecting parts of the anterior rectal wall felt roughly folded, somewhat firm, and granular. From an exploratory puncture just below the umbilicus no fluid escaped. At a post-mortem examination of the woman, who died with the appearance of exhaustion on 10th October 1875, we found an abdominal pregnancy, with a dead apparently mature foetus. In the peritoneal cavity thin, greenish fluid. The intestines glued together by several fibrinous bands; the gestation sac shrivelled up and containing a bad-smelling, turbid, grayish-green mass, and the shrivelled up soft parts, partly gangrenous, of a foetus, about 40 centimetres long. The placenta was adherent to the pouch of Douglas, with some cotyledons attached to the anterior rectal wall. The rectum itself presented the appearance of marked chronic catarrh with firm infiltration, especially of its anterior wall.

CASE II.—Mrs E., 31 years old, delivered normally  $8\frac{3}{4}$  years ago, and has since then suffered from the symptoms of chronic metritis, with cervical catarrh, bad nutrition, and weak condition



of the blood. She had taken internally preparations of iron for a long time. In November 1881 I found a fairly well-marked metritis and chronic endometritis. The parts adjacent to the uterus were healthy. In July 1882 the house physician informed me that the woman had had stoppage of her menstruation since January, and now showed all the signs of pregnancy. In the beginning of the last half of her pregnancy very severe troubles manifested themselves. Now and again hæmorrhage from the genitals occurred on slight provocation, her abdomen was very tender to touch, and the movements of the child very painful. As the child was very easily palpable under the abdominal walls, he therefore considered it to be probably an extra-uterine gestation. In September 1882 the movements of the child ceased entirely. I found in the middle of September a swelling of the abdomen, like a pregnancy approaching full time, and milk in the breasts, pigmentation of the papillæ and linea alba, deep bluish-red discoloration of the vaginal mucous membrane. The uterus, about twice its normal size, had a round, patulous os, and lay to the right of an ovoid tumour, reaching from the middle of the pelvis to the false ribs, in which one felt a hard, rounded portion at its upper part, and in its lower part an uncertain feeling of resistance. Neither the foetal movements nor heart sounds were perceptible. In the inguinal region on both sides, loud bruits were heard. The woman went home in the end of September. There we heard she had quickly recovered, and still carries the tumour, which has by degrees become firmer and somewhat smaller, the dead mature foetus gradually forming a lithopædion of an abdominal pregnancy without any harm to her health.

CASE III.—Miss S., 24 years old, regular since her 13th year, but always pained, menstruated last in May 1881. She says most distinctly that she had had coition only once on June 7th, and not since. This was disturbed by a sudden fright. In the next few days attacks of giddiness, general depression, with frequent severe abdominal pains set in, so that the last few months have, with slight intervals, been spent in bed. Digestive troubles were completely awanting. With the gradual increase of her abdomen the patient began to consider herself pregnant. A slight degree of struma showed itself. After the fifth month the health improved. It must be here noted that the patient had neither noticed swelling of the breast nor movement of the child, notwithstanding that both existed. In December 1881 the sound was introduced, and since then there has been a continuous discharge containing blood and mucus. On 19th Feb. 1882 we found milk in the well-developed breasts, the abdomen distended about the size of an eight months' pregnancy, pigmentation of the linea alba. The examination repeated gave the feeling of a left-sided tumour, about twice the size of a man's fist, which was recognised from its



position and connexion with the uterus (which was as large as the fist) to be related to the left ovary. We diagnosed an ovarian gestation with fully developed child, whose head we conjectured to be in the upper segment of the tumour, and, later on, recognised it by the unusual crackling on pressure and examination with a probe. We felt distinctly the round ligament, the tube, and the left ovarian ligament distinct from the uterus, whose fundus could be defined rising up on the tumour; on the right side tube and ovary could distinctly be felt. As the patient began to become emaciated, to vomit, and to be feverish in the evening, also to complain of pains always more severe in the middle line and left side of the belly, we performed laparotomy on 5th June 1882. The state of matters found was an ovarian pregnancy on the left side, as already diagnosed; the gestation sac completely free in the greater part of its extent, only on the left wall of the pelvis and the floor of the pouch of Douglas was it adherent, just like a broad and short stalked ovarian tumour on the left border of the uterus; the left broad ligament was stretched over and adherent to it in a flat arch. The gestation sac was slit up through the whole extent of the abdominal wound, situated in the linea alba, from the navel to three finger breadths above the symphysis, and sewed to the edges of the abdominal wound; thereafter the peritoneum, then a firm albugineous thin layer of a soft yellowish-red tissue, and, finally, the lining membrane, layer by layer, were cut through. Very much distended veins and single arteries, which were cut through under the peritoneum, made several ligatures necessary. The child (which was lying in the first breech position) was after diminution extracted. It was a female, 1800 grammes in weight, 46 centimeters long, somewhat shrivelled, of a deep yellow colour, and covered with a fatty membrane. The liquor amnii was present only in small amount as a yellow, thick, emulsion-like fluid. After removal of the embedded foetus we discovered that the umbilical cord led to a pretty thick elongated placenta on the posterior and upper part of the gestation sac. After copious washing out with salicylic lotion and careful drying (the placenta and umbilical cord being left in position), the sac was plentifully sprinkled with equal parts of tannin and salicylic acid. By means of three tubes (two soft ones in the upper lateral part of the incision, one glass one in the lower part) it was drained, the intervals between the drains being stuffed with thymol gauze; finally an antiseptic dressing, with an opening for the glass drain (which had a stopper of wadding), was laid on the top. Recovery took place with very little reaction. The two elastic drains were removed on the 8th June. From this date daily salicylic washings were employed, and at different times pieces of membrane and, on the 21st June, some cotyledons of a thick, firm, tanned-like placenta removed. It must be mentioned here that with the attempt to remove the rest of the placenta, bleeding at once occurred. Under further application of

tannin-salicylic acid and washing out on the 28th of June the whole of the remaining part of the odourless thick placenta came away. On the 30th the wound was closed excepting a small opening, on 23rd July the patient left her bed, on 13th August she had her menses in the normal manner.

On September 9th we found the patient remarkably healthy-looking, and the uterus very much thinned in its supravaginal portion, 8 centimetres long, elevated and drawn towards the radiating abdominal cicatrix. A stalk-like band bound the left angle of the fundus to an irregular tumour about the size of a child's fist, which resembled in every respect a left-sided ovarian tumour, and was fixed by adhesions to the abdominal cicatrix. The right ovary was perfectly normal. On 13th June 1883 the following was the condition: the radiating cicatrix showed in its midst a part about the size of a florin granulating, which, according to the patient's statement, easily bled through rubbing against a badly-adjusted abdominal binder. We found the flabby, somewhat elongated uterus still a little elevated, the left ovarian ligament passed into the centre of the abdominal cicatrix with a cord-like insertion, which adhered with a broad round base to the cicatrix, from whence it passed downwards, lessening in size, to the left broad ligament, and was lost in its lower part. Otherwise the patient was quite healthy.

This was a clear case of left ovarian extra-uterine gestation.

These are the cases on which rests my experience of extra-uterine gestation. I have repeated them as shortly as consistent with the object of this communication, and reserve to myself a more complete recital for a larger work.

It will be at once clear to every one versed in these matters why we cannot apply to extra-uterine gestation directly the important observations recently made in regard to abdominal and pelvic tumours. Let us, apropos of these communicated cases, throw a glance at the special points in our knowledge of this anomaly as it has now been pictured before us.

(To be continued.)

### III.—CLINICAL CASES OF EAR DISEASE.

By JAMES PATTERSON CASSELLS, M.D., M.R.C.S. Eng., Fellow of the Faculty of Physicians and Surgeons, Aural Surgeon and Lecturer on Aural Surgery in the Glasgow Hospital and Dispensary for the Diseases of the Ear.

CASE I.—*Male, aged 40—Acute Eustachian Catarrh—Paracentesis—Cured.*

*History.*—Caught cold three weeks ago, and became dull in the right ear ten days ago. No pain, but considerable discharge.

*Present State.*—Watch—right  $\frac{7}{8}$ . The membrana tympani is

very concave, and exhibits signs of congestion. The Eustachian tube is catarrhal and very narrow, indeed quite closed. The naso-pharynx is congested, especially in the neighbourhood of the passages and orifices of the tubes.

*Diagnosis.*—The case is one of subacute catarrh of the right Eustachian tube and bad nasal catarrh.

*Prognosis.*—Favourable to cure.

*Treatment.*—Remove congestion of naso-pharynx and of tubes by free purgation, potash douche, Turkish bath, Politzerizing, and iodide of potassium. Paracentesed the right membrana tympani, and got a little serum and mucus out of the tympanic cavity.

*Result.*—Dismissed cured in twenty days. There is still a little catarrh of the nasal passages, but the hearing is normal.

CASE II.—*Male, aged 50—Acute Eustachian Catarrh—Paracentesis—Cured.*

*History.*—Ill some weeks with cold, and then began to get deaf in the left ear.

*Present State.*—Watch—left  $\frac{4}{5}$ . Bone-conduction good. The left membrana tympani is white and opaque. The naso-pharynx is highly congested and relaxed. The Eustachian tube is catarrhal. Inflation opens it and improves the hearing. There is a râle of fluid in the tympanum.

*Diagnosis.*—The case is one of subacute Eustachian catarrh due to nasal catarrh.

*Prognosis.*—It is curable.

*Treatment.*—Remove congestion of the naso-pharynx and tubes, and fluid from the tympanum, and improve the tone of the tissues by Politzerizing, catheterizing, potash douche, and paracentesis.

*Result.*—Dismissed cured in two weeks.

CASE III.—*Female, aged 65—Subacute Eustachian Catarrh—Improved.*

*History.*—Has been hearing tolerably well till caught cold quite recently. Hereditary history good.

*Present State.*—Watch—right  $\frac{6}{7}$ , left  $\frac{4}{5}$ . Bone-conduction bad. Tuning-fork on both. The membranæ tympanorum are whitish, opaque, and concave. The Eustachian tubes are very catarrhal and swollen. The nasal passages are congested.

*Diagnosis.*—The case is one of subacute Eustachian catarrh due to nasal catarrh.

*Prognosis.*—Favourable to improve.

*Treatment.*—Remove the congestion of the naso-pharynx and tubes by Politzerizing, catheterizing, and potash douche.

*Result.*—Much improved.

CASE IV.—*Female, aged 7½—Eustachian Catarrh from Post-Nasal Catarrh—Cured.*

*History.*—Had measles a year ago, but did not seem to have any



bad symptoms. Got deaf five weeks ago, and then became very variable in her hearing. No pain; no discharge.

*Present State.*—Very deaf. Watch—right  $\frac{2}{3}$ , left  $\frac{2}{3}$ . Bone-conduction good. The membranæ tympanorum are concave, and exhibit signs of mucus in the tympana. The Eustachian tubes are completely closed, and only opened after forcible Politzerizing. Then hears better, and the mucus (yellow in colour) is seen more distinctly.

*Diagnosis.*—The case is one of Eustachian catarrh from post-nasal catarrh and impermeability of the tubes, owing to exudation in the tympana.

*Prognosis.*—Favourable to cure.

*Treatment.*—Remove congestion of the naso-pharynx and tubes, and restore their patency by Politzerizing, potash douche, cod-oil, and paracentesis.

*Result.*—Dismissed, hearing normal.

CASE V.—*Male, aged 11—Chronic Eustachian Catarrh—Cured.*

*History.*—Ill since childhood from nasal catarrh. Hereditary history good. Is very deaf. No pain; no discharge.

*Present State.*—Watch—right  $\frac{1}{2}$ , left  $\frac{1}{2}$ . The membranæ tympanorum are opaque and very concave. There are signs of mucus in the tympana. The Eustachian tubes are catarrhal and very narrow. The naso-pharynx is congested and very much hypertrophied, and nearly or quite closed; it is also discharging much tough mucus and pus-like, ropy discharge.

*Diagnosis.*—The case is one of chronic Eustachian catarrh due to nasal catarrh.

*Prognosis.*—It is favourable to cure.

*Treatment.*—Remove the congestion and improve the local and general tone by potash douche, salt douche, and cod-oil. Make the tubes patent by Politzerizing. Paracentesed both, and got a large quantity of mucus out of the tympanic cavities.

*Result.*—Dismissed cured in three weeks.

CASE VI.—*Male, aged 18—Chronic Eustachian Catarrh—Cured.*

*History.*—Pain in the left ear a year ago, and occasionally since. Cause is supposed to have been cold. Is now quite deaf in it. Hereditary history good, but is of the catarrhal constitution. Is sometimes troubled with sore throat. No giddiness. Slight tinnitus.

*Present State.*—Watch—left  $\frac{2}{3}$ . Bone-conduction bad. Tuning-fork good. The left membrana tympani is opaque and striated. The Eustachian tube is catarrhal. The naso-pharynx is much congested and relaxed. After Politzerizing he seems to hear speech better, but not watch.

*Diagnosis.*—The case is one of chronic Eustachian catarrh, with recurring tympanic congestion.

*Prognosis.*—Doubtful.

*Treatment.*—Improve the local and general tone and lessen the congestion of the tissues by Politzerizing, catheterizing, potash douche, cod-oil, bismuth, and Hagen's olfactory.

*Result.*—Dismissed cured, hearing normal.

CASE VII.—*Female, aged 23—Chronic Eustachian Catarrh—Cured.*

*History.*—Been deaf in both ears for six years. Cause unknown. No pain; no discharge. Constant tinnitus in the right, occasional in the left. Had scarlet fever nineteen years ago, and measles twelve years ago, but no bad effect from either. Is of the catarrhal constitution.

*Present State.*—Watch—right  $\frac{7}{8}$ , left  $\frac{7}{8}$ . Bone-conduction good. The membranæ tympanorum are very concave and opaque. The Eustachian tubes are catarrhal and narrow. The naso-pharynx is much congested and relaxed, and the nasal membrane ulcerated.

*Diagnosis.*—The case is one of chronic Eustachian catarrh due to nasal catarrh.

*Prognosis.*—Improvable and arrestable.

*Treatment.*—Remove the congestion and restore the tone by Politzerizing, catheterizing, potash douche, and cod-oil.

*Result.*—Dismissed cured in two months.

CASE VIII.—*Female, aged 25—Chronic Eustachian Catarrh—Improved.*

*History.*—Deaf in the left ear for ten months. Cause unknown. Hereditary history good in every respect, and her general health is good.

*Present State.*—Watch—right normal, left  $\frac{7}{8}$ . The left membrana tympani is very concave and opaque, and shows signs of semi-dried mucus within the tympanum. The Eustachian tube is narrow and catarrhal. The naso-pharynx is congested and relaxed.

*Diagnosis.*—It is evidently a case of chronic catarrh of the tube, which has caused tissue changes both in the tube and accommodating apparatus.

*Prognosis.*—It is improvable, and, as it is progressive, it is also arrestable.

*Treatment.*—Remove the post-nasal catarrh, and improve the general and local tone, and make the tubes patent by Politzerizing, catheterizing, potash douche, and cod-oil.

*Result.*—Dismissed, hearing tolerably well.

CASE IX.—*Male, aged 25—Chronic Eustachian Catarrh—Cured.*

*History.*—Had measles twenty-three years ago. No pain; no discharge. Is subject to catarrh of the nasal passages. He is a "mouth-breather." Hereditary history is good, but is of the catarrhal constitution.

*Present State.*—The membranæ tympanorum are dull, opaque,

and concave. The Eustachian tubes are very catarrhal. The naso-pharynx is much congested.

*Diagnosis.*—Chronic Eustachian catarrh.

*Prognosis.*—Favourable to improvement, but not to complete cure.

*Treatment.*—Remove congestion of naso-pharynx and of tubes, and restore general and local tone by potash douche, cod-oil, and Politzerizing.

*Result.*—Cured.

**CASE X.—Male, aged 35—Chronic Eustachian Catarrh—Cured.**

*History.*—Caught cold about four years ago, and left ear began to buzz, which has continued since, with increasing deafness. The right ear, though in hearing almost normal, buzzes also at times, and is then deaf. No staggering; no giddiness. He is of the catarrhal constitution. Several of his family died of consumption. Hereditary history otherwise good. No pain; no discharge.

*Present State.*—Watch—right normal, left  $\frac{1}{2}$ . Bone-conduction good on the right, and none on the left, but the watch placed on the left side is heard on the right. After Politzerizing, watch—left  $\frac{1}{2}$ , and heard on the left as well as the right. The right membrana tympani is slightly opaque and over-concave, otherwise normal. The left is dull and opaque, and very concave. The left Eustachian tube is very narrow and catarrhal. The naso-pharynx is very much congested.

*Diagnosis.*—The case is one of chronic Eustachian catarrh of the left, occurring in a catarrhal subject.

*Prognosis.*—Favourable to improve and arrest.

*Treatment.*—Remove the congestion of the naso-pharynx and tubes by Politzerizing, catheterizing, potash douche, and salt douche.

*Result.*—Dismissed cured; hearing normal.

**CASE XI.—Male, aged 40—Chronic Eustachian Catarrh—Cured.**

*History.*—Slightly deaf now and again. Is of the catarrhal constitution, and subject to bronchitis and pleurisy. No pain; no discharge; slight tinnitus. Right ear the worst.

*Present State.*—Watch—right  $\frac{1}{2}$ , left  $\frac{1}{4}$ . The right membrana tympani is very concave and catarrhally thickened. The left membrana tympani is the same, but in a slighter degree. The Eustachian tubes are very catarrhal and narrow. The naso-pharynx is highly congested and spongy, and ulcerated in parts. After Politzerizing and catheterizing he hears a little better. He is evidently out of tone.

*Diagnosis.*—The case is one of chronic Eustachian catarrh of the right, and in a slighter degree of the left, due to the catarrh of the nasal passages.

*Prognosis.*—The case is curable.



*Treatment.*—Remove congestion of the naso-pharynx and improve its tone, and make the tubes patent, and improve the general tone by Politzerizing, catheterizing, potash douche, cod-oil, and country air.

*Result.*—Dismissed cured, hearing normal, in twenty-four days.

CASE XII.—*Male, aged 40—Chronic Eustachian Catarrh—Cured.*

*History.*—Ill in right ear for about one year. Cause, cold. Is in bad condition from want of exercise.

*Present State.*—Watch—right  $\frac{7}{8}$ . Bone-conduction good. The right membrana tympani is abnormally concave, and dull and opaque. The Eustachian tube is catarrhal. The naso-pharynx, as shown by the rhinoscope, is ulcerated near the orifice of the Eustachian tube.

*Diagnosis.*—The case is one of bad Eustachian catarrh due to the state of the naso-pharynx and his general health.

*Prognosis.*—It is curable with time.

*Treatment.*—Improve the general and local tone, and remove the congestion of the naso-pharynx and tubes by Politzerizing, catheterizing, bougie, potash douche, cod-oil, exercise, and free purgation.

*Result.*—Cured in about three months.

CASE XIII.—*Male, aged 44—Chronic Eustachian Catarrh—Cured.*

*History.*—Dull in both ears for ten years. Is in good health. No pain; no discharge. Father became slightly deaf at fifty years of age.

*Present State.*—Watch—right  $\frac{7}{8}$ , left  $\frac{1}{2}$ . Bone-conduction good. The membranæ tympanorum are very concave and opaque. The Eustachian tubes are catarrhal. The naso-pharynx is also catarrhal. The tissues of the throat and nose are highly congested.

*Diagnosis.*—The case is one of chronic Eustachian catarrh due to nasal catarrh.

*Prognosis.*—The case is favourable to improvement and arrestment, but not to cure.

*Treatment.*—Remove the congestion, and improve the tone by Politzerizing, catheterizing, cod-oil, and potash douche.

*Result.*—Dismissed hearing quite well.

CASE XIV.—*Female, aged 50—Chronic Eustachian Catarrh—Cured.*

*History.*—Caught cold in the head some time ago, and has been slightly dull since. No pain; no discharge. Hereditary history good.

*Present State.*—Watch—right  $\frac{2}{3}$ , left  $\frac{1}{3}$ . Not heard on bones. The membranæ tympanorum are opaque and over-concave. The Eustachian tubes are closed and catarrhal. The naso-pharynx is congested. After Politzerizing she hears much better, both tubes being opened with some difficulty.

*Diagnosis.*—It is a simple case of disturbance of tension due to slight nasal catarrh involving the orifices of the tubes.

*Prognosis.*—It is quite curable.

*Treatment.*—Remove the congestion and improve the tone and tension by Politzerizing and potash douche.

*Result.*—Dismissed cured in ten days.

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#### IV.—REPORT OF ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL FOR QUARTER FROM 1ST FEBRUARY TO 30TH APRIL 1883.

By ANGUS MACDONALD, M.D.

DURING this trimestre the number of intern cases was 51. Of these there were, primiparæ, 25; multiparæ, 26. The multiparæ were, again, made up of 14 ii.-paræ, 6 iii.-paræ, 5 iv.-paræ, and 1 viii.-para. The average age of the intern patients was, of primiparæ, 22.2 years; of multiparæ, 26.2 years.

Of these 51 patients, 46 gave birth to living children, 4 to still-born children, whilst in one case the foetus was putrid. There was no case of twins. Of the 46 living children, 25 were born of multiparæ, viz., 13 males and 12 females; and 21 were born of primiparæ, viz., 9 males and 12 females. Of the dead children, 4 were born of primiparæ and 1 of a multipara.

The presentations that were noted were as follows:—L.O.A., 38; R.O.P., 6; R.O.A., 1; L.O.P., 0; L.S.A., 2; R.S.P., 1. In one case the shoulder presented. Of the R.O.P. cases 2 were persistent; but they terminated naturally and gave rise to no trouble or complication. The heads in both cases were small.

The extern cases numbered 117. Of these, 23 were primiparæ and 94 multiparæ. The multiparæ, again, were made up of 14 ii.-paræ; 15 iii.-paræ; 13 iv.-paræ; 8 v.-paræ; 10 vi.-paræ; 12 vii.-paræ; 5 viii.-paræ; 3 ix.-paræ; 3 x.-paræ; 4 xi.-paræ; 2 xii.-paræ; 1 xiii.-para; 1 xvi.-para. In three cases the number of the pregnancy could not be made out with certainty.

The average age of the extern cases was, of primiparæ, 21 years; multiparæ, 31 years. Of the children 97 were reported as born alive, 14 as still-born, and 2 as putrid. But the particulars in several of the cases, supplied by the students in charge, were very defective, so that I am unable positively to state the cause of death in the children. The mortality is certainly high, however. The average duration of labour was, for the multiparæ, 1st stage, 9 hours; 2nd stage, 1 hour 32 min.; 3rd stage, 8 min. Primiparæ, 15 hours 50 min.; 2nd stage, 2 hours 11 min.; 3rd stage, 6 min.

There was no case of maternal death, either in the hospital or among the extern cases, during the quarter. As this is the second

quarter in succession in which I have been able to report a term without any maternal deaths in the hospital, I do so with much thankfulness and satisfaction, as it demonstrates that our new hospital is proving itself unobjectionable from a sanitary point of view, although some time ago doubts were thrown upon its condition.

I wish to avoid all boasting, as every obstetrician knows full well how bad cases occasionally come upon him, whether in hospital or in private practice, which no forethought, skill, or care on his part can avoid. Each of us in our turn is liable to suffer in mind, in reputation, and even in purse, on account of such misfortunes. I do not know any other possible position in which an accoucheur needs more the sympathy and moral support of his brethren than when he has one or two bad cases in his practice. Yet it is to be regretted that he occasionally does not meet with it. All kinds of sympathetic doubts are thrown out. There is a tendency to magnify the disaster rather than to inquire carefully into and ascertain its exact nature and extent. Now, though I should be the last to encourage any course of action on the part of a practitioner that should in the remotest degree involve avoidable risk to his patients, and far less to condone it when a practitioner carelessly involved his patients in disaster, yet I do think we ought to stand by one another, shoulder to shoulder, in case any of us happen to meet with misfortune, and to avoid anything like taking advantage of one another. The Maternity Hospital and maternities in general have suffered from this tendency to magnify recorded unfortunate results.

Indeed, in regard to our new hospital, on more occasions than one doubts have been thrown out respecting its sanitary condition, or in regard to the possibility of making it a safe place of confinement for the unfortunate people who are compelled to use it. But if we are able, by careful attention to cleanliness, by the intelligent use of antiseptics, both on the part of patients, nurses, doctors, and students, and by avoiding overcrowding and too long occupation of the same ward at a time, to show the public that we get results that will compare favourably with private practice among the same class of people, we shall certainly maintain the just claims of the institution for a larger share of professional and public support and countenance than it has yet received. This countenance, I hold, however, it fully merits.

Throughout the quarter the strictest antiseptic precautions were attended to. Carbolic acid was kept constantly evaporating in the wards, the nurses were compelled to syringe the vaginae of their patients with a solution of 1 in 60 thrice daily, and both doctors and students washed their hands in carbolic acid lotion before making any vaginal examination.

I was greatly gratified to find, on my return to duty this year, that the glass ends of the vaginal douches which I introduced



two years ago had recommended themselves to the acceptance of my colleagues and had come into general use in the wards.

As each patient has a vaginal glass tube to herself, which is kept under carbolic solution when not in use, and which can be readily inserted into the end of the douche tube when required, risk of spreading infection from patient to patient from the use of a common syringe is completely avoided.

The more I see of midwifery and gynaecology, the more I am confirmed that the safety of patients urgently requires the diligent use of disinfectants and cleanliness. I feel more and more satisfied that operations on the genitals, of whatever sort, are specially dangerous, not so much because of the inflammatory reaction, which is likely to be so severe in itself, as because there is extreme facility for septic absorption. This is particularly the case in a maternity hospital, where, from aggregation of septic influences, there is specially apt to arise putrescent materials of highly toxic qualities.

We had only two cases of ophthalmia neonatorum, and only one of these was serious. There was a third case left on our hands from Dr Simpson's quarter; but we do not, of course, regard it as ours. During the whole quarter, as, indeed, during the last quarter on which I was on duty in the Maternity Hospital (two years ago), every child's eyes were washed, immediately after birth, with a solution of 1 in 100 of carbolic acid. We tried at first the use of 1 in 50; but we found that so strong a solution was irritating to the conjunctivæ, and ultimately used the higher dilution. The children's eyes, for several days after birth, were similarly treated. The results, though not so favourable as those reported by Credé from nitrate of silver, have certainly been so far satisfactory. Now that the attention of the medical officers to the institution has been so directly drawn to this important subject by Dr Simpson in his recent paper, it is to be hoped that ophthalmia neonatorum will be ultimately banished from the Maternity. Next quarter I am on duty I mean to employ the nitrate of silver, as recommended by Credé and others, instead of carbolic acid, so as to be able, if possible, to get results equally favourable to theirs.

The forceps were used three times during the session—twice for delay in the second stage, and once for slight contraction at the brim. The cases were all easy, and warrant no special remarks.

The perinæum was more or less torn in 7 cases. In none of them was the tear specially serious. All of them were stitched with silk-worm gut sutures immediately. Nearly all adhered by first intention.

Delivery was effected in one case by evisceration. In a case of flat pelvis considerable difficulty was experienced. Premature labour was also performed in one case of tight pelvis at the eighth month. These cases will warrant a short individual reference to them. Reference will also be made to a case of modified typhoid fever which followed delivery.

CASE I. *Impacted Shoulder Presentation; Evisceration and Spondylotomy*.—L. C., æt. 20, ii.-para, suffered from syphilis during this her second pregnancy. She was sent from the police office to the Maternity on 6th February, when labour threatened. She was then at full time. During the day there were no pains. At 4 P.M. the outer os was found to be about the size of a two-shilling piece, the cervix soft and dilatable, and a limb was found to be presenting. The next day was uneventful, but labour set in on the evening of the 9th and proceeded rapidly, the membranes rupturing at 6 P.M., when the right arm prolapsed. Both of the resident medical officers were absent on duty in different parts of the town. I (Dr M.) arrived at 8.15, when the right shoulder was immovably jammed into the pelvis, and the child was lying in the dorso-anterior left cephalo-iliac position. Fearing rupture of the uterus from the intensity of the pains and from the fact that the cervical segment of the uterus felt thin, I opened the thorax of the child in the region of the right axilla, eviscerated, and ultimately divided the spinal column. I was then able to double up the foetus and bring down the breech. The shoulders and head followed without difficulty. The patient's recovery was slow, as she had an attack of metritis and subsequently subinvolution, but she recovered completely after a period of treatment in the Royal Infirmary. I am not satisfied that in this instance I did not spoil a good opportunity of watching spontaneous expulsion, as before I arrived there is reason to believe the child was dead. It turned out, moreover, to be small. We could not make out from the patient whether she was or was not at her full time. As there was reason to think she was, I felt it advisable in her interest to hasten the delivery by the only practicable means, viz., evisceration and spondylotomy, by which the expulsion was undoubtedly facilitated.

CASE II. *Flat Pelvis; Presentation of the Breech*.—Mrs B., æt. 36, came on the recommendation of her medical attendant in the country, with the following history:—Her first three children were born alive after long and difficult labours. Her fourth child (a male) was delivered by craniotomy, and in her fifth and sixth confinements forceps were used and living children born. The following was her condition on admission:—The abdomen was pendulous, and there was marked right lateral obliquity of the uterus. The head was found to be presenting and to be freely movable above the brim. The measurements of the pelvis were:—Int.-cr., 10; int.-sp.,  $9\frac{1}{2}$ ; inter.-troch.,  $11\frac{3}{4}$ ; ext. conj.,  $7\frac{1}{4}$ ; diag. conj.,  $4\frac{1}{4}$ ; true conj. (calculated),  $3\frac{1}{4}$ – $3\frac{1}{2}$ . Labour set in at 4 P.M. on 17th March. There was no escape of liquor amnii noticed, but next morning meconium was observed in the discharge. I saw her at 9.30, when the cervix was almost fully dilated. The breech was found presenting, and beside it lay a hand. I brought down the left leg, and saw that the child was evidently dead, as the cuticle



was loose and peeled off. The freeing of the arms and delivery of the head presented considerable difficulty. The patient's recovery was perfect.

On the child's skull there was a marked groove situated over the junction of the parietal and frontal bones on the right side, so that the head had apparently been subjected to considerable pressure in passing through the pelvis. This patient had previously been seen by Professor Simpson, who recommended that the delivery should be delayed till term. Contrasting her previous obstetrical history with her present delivery, one is inclined to think that her pelvis is diminishing in size; but this may be due to increase in the size of her children's heads. I do not believe that, had the child been alive, we could have delivered it without causing fatal injury to it.

CASE III. *Induced Premature Labour.*—Mrs A., æt. 28, was confined of a still-born child by Dr Croom on 4th October 1881, by aid of forceps. She was then advised, in the event of a subsequent pregnancy, to apply at the Maternity before the seventh month. She was admitted on 20th April 1883, having then entered a week or ten days on the seventh month. The measurements of the pelvis were:—Inter-cr., 10; inter-sp.,  $9\frac{1}{2}$ ; inter-troch.,  $12\frac{1}{8}$ ; ext. conj.,  $7\frac{1}{4}$ ; diag. conj.,  $4\frac{1}{2}$ – $4\frac{3}{4}$ ; true conj.,  $3\frac{3}{4}$ –4. Bodies of sacral vertebræ were very markedly in front of their sides, especially at upper part of sacrum; sacrum bent between two and three pieces, more so at lower extremity; coccyx quite movable and appears natural; outlet markedly narrow, both laterally and antero-posteriorly; symphysis thick. As this patient's pelvis seemed sufficiently large to pass a child's head at the eighth month, I was in no particular hurry to expedite delivery, and only decided to commence on 2nd April.

The cervix was found persistent throughout the whole length and very firm when we began the operation. The hot douche was ordered three times daily for a quarter of an hour at a time. On 24th the cervix was found considerably softened and patulous. Nurse ordered to use the open enema pipe, and not the vaginal tube. On 25th (afternoon) patient was put under chloroform, when the cervix was found to be traversable to the examining finger and soft. As from the feel of the uterus we had reason to believe that the placenta was to the right, a new gum elastic catheter was passed between the membranes and the uterus over the head of the child anteriorly; it passed very readily without rupturing the membranes. When it was introduced so that  $1\frac{1}{2}$  inches of the length protruded beyond the vulva, blood began to flow freely through it. It was now slowly retracted until blood ceased to flow. The catheter could easily be felt lying over the child's head from the wall of the abdomen. It remained in till 4 o'clock on the following morning, when it dropped out. Patient passed a very restless night,



but no pains. On 26th and 27th patient had the hot douche every two hours. The cervix, meanwhile, was observed to dilate and shorten from above downwards, whilst the bag of membranes was formed. At 11 o'clock on Saturday, the 28th April, labour pains supervened, and recurred regularly every five minutes. As the cervix was not dilating well, patient had, at intervals of two hours, three doses of 15 grs. of chloral. At about 7 A.M. on 29th April, 1st stage was completed, and the membranes ruptured spontaneously at 7.30 A.M., and delivery occurred at 10.10 A.M. There was a marked caput succedaneum on child's head. The bones were particularly movable; no hæmorrhage before delivery; no premature separation of any part of the placenta. Only trace of the previous injury to that organ was a slight firm clot alongside the lower anterior border. The patient made a good and uninterrupted recovery. The child did well.

This case seems to me to help to demonstrate the certainty and safety of Kiwisch's method of inducing premature labour when we can afford to wait till it acts. It also tends to show that the danger of injury to the placental sinuses is not so great as is usually supposed. That we penetrated a placental sinus, even while anxiously trying to avoid it, there is not the slightest doubt. But it is equally evident that no harm was done.

It is a nice question to determine whether the elastic resistance of the uterus applied to the membranes is not sufficient to close up a rupture of this kind. The blood inside the sinuses is certainly under very much less pressure than that in the arterial twigs. Be this as it may, we had no clot and no progressive separation of placenta. Had even a small arterial twig been injured, we could scarcely have hoped for such a favourable result.

CASE IV. *Pregnancy complicated with Typhoid Fever.*—Mrs B., æt. 30, became pregnant for the seventh time in June 1882. In September she had an attack of typhus fever, when she was treated for eight weeks in the Old Royal Infirmary. From there she was transferred to the New Infirmary, and treated for an abscess about the hip. From the time of her admission on 12th February till her confinement on 2nd March her temperature was  $97^{\circ}$  or  $98^{\circ}$ . Her delivery was easy and normal, and on the evening of it her temperature went up to  $101^{\circ}8$ . On the two following days the temperatures were, M.  $103^{\circ}2$ , E.  $103^{\circ}2$ ; M.  $103^{\circ}2$ , E.  $104^{\circ}2$ . For the next five days the morning temperature was  $101^{\circ}5$  or  $102^{\circ}5$ , and the evening temperature close on  $104^{\circ}$ . There was some bronchial affection, but not enough to account for the temperature. The bowels were moved three to six times a day, but the motions were not of a typhoid character. For another week the temperature remained steadily over  $101^{\circ}$ , but there was at no time anything approaching a well-marked typhoid character in the temperature chart. On the fourteenth day the temperature suddenly fell to  $96^{\circ}2$ , and it remained below  $97^{\circ}$  till her dismissal on 29th March.

The treatment employed was symptomatic—quinine, Warburg's tincture, beef-tea, port, etc. The child was a small and puny one, and died during the first week.

The diagnosis in this case is far from certain. I give it as the only opinion that I could come to regarding the case, and this, I take it, means a diagnosis. At one time I thought the case would turn out one of acute tuberculosis; but the subsequent history rendered that view untenable.

On the whole, I conclude this report with the observation, that if we have nothing specially brilliant to report, we have at least arrived at the end of the quarter without any serious disaster. For this we have reason for great thankfulness.

I have also to record my thanks to the resident medical officers, Drs Collie and Sinclair, for much valuable aid, rendered in many ways, during the quarter.

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## V.—SUMMER STUDIES.—NO. II.

By J. BOYD, M.D., Slamannan.

IN consequence of the arrival of a series of numbers of the *Weekblad van het Nederlandsch Tijdschrift voor Geneeskunde*, the weekly number of the *Netherland Journal of Medical Science*, I was induced last spring to devote every half hour I could rightly spare from ministering to the corporeal woes of rural humanity to the study of the Dutch grammar and dictionary, and, aided by some previous acquaintance with High German and broad Scotch, found the difficulties attending the acquisition of the sturdy, homely Holland tongue just sufficient to give piquancy to the occupation.

The publication above referred to purports to be the organ of the "Nederlandsche Maatschappij tot Bevordering der Geneeskunst," the Dutch Association for the Advancement of Medical Science. The first number to hand, that of 15th October 1881, is entirely filled with an account of the proceedings of the scientific reunion held at Zwolle, when the president called on Professor C. H. Kuhn of Amsterdam, who commenced the proceedings by a treatise on the "Morphology of Bacteria." The speaker began by a reference to the imperfection of our knowledge as regards micro-organism, the lack of unanimity as to the place of these in natural classification—Ehrenberg having described the most of what we now generally term bacteria as infusoria; Naegeli considering them as mould; while Brefeld and Sachs, with Billroth, included them with the algæ. Through Haeckel and his followers, these were finally arranged in the list of the *Protistea*. The same disparity of view is seen as to their sphere of action. It is agreed that bacteria take an active part in putrefaction, but the concord goes



no further. That so many changes that take place in decomposing matter should be entirely the work of bacteria is not yet known, and, indeed, is not probable. Further investigations must first discriminate what direct and what indirect changes are effected by them, and whether changes in the putrefactive process may not be where their presence is only incidental. The question, so deeply important, whether infective diseases are the consequences of bacteria activity cannot yet be answered in a single word, although it may be said to be probable that all such are thus dependent. Of some—splenic inflammation, for instance—can it now be said to be ascertained? Koch has lately fastened general attention on the important results attainable by such investigation. By laborious and prolonged experiments he has been able to depict various bacteria in the fluids and tissues, differing among themselves in size, shape, and structure, and still more in their diffusion through the body, and thus characteristic of a definite malady. It is to be expected that he will be early followed up in this line by subsequent inquirers. The “speaker” then displayed some twenty pictures of the chief forms of bacteria, among which, as best known, was *Bacillus anthracis*. His object was to depict exactly what might be discerned through good lenses, neither more nor less,—concluding with remarks on the insufficient generalization of Naegeli and others on insufficient information; but the later inquiries, such as those of Cohn, would give more extent and precision to our knowledge on the subject.

Dr Traub of Leyden next gave a disquisition on the operative treatment of *genu valgum*, wherein, after some reference to the labours of Mikulicz, Mayer, and MacEwen, he drew attention to some instances of that disease in bakers, cellar-workers, about sixteen or seventeen, who, being hard-wrought and underfed, were led to seek an easy position with the knees brought together and the ankles turned outwards, became at length thus deformed whenever any rachitic tendency was present. In distinctly rachitic children, during the half of the first decennium, the development of such malformation is more accentuated; and in the *redressement forcé* of Delore, the forcible extension of the bone by hand power could only be done in very young cases without risk of making “*le remède pire que le mal*.” The introduction of the antiseptic treatment had enlarged the field of operative procedure in these cases, and these comprised operations on, first, the tibia, and secondly, on the femur. Billroth’s method of subcutaneous osteotomy was described as the simplest and least exposed to sepsis, but had the disadvantage of the operator being unable to follow the course of his instrument with either eye or finger. The operation of Mayer or Schede, where the external wound is large enough to render visible all the necessary steps, was approvingly mentioned, conducted with antiseptic precautions. But the small statistics of results contrast with the more extended series of femur



operations for genu valgum. He began with describing the knee-arthritis of Ogston, going through each step of the procedure, and then went on to MacEwen's, which differed from Mayer, who attacked the tibia, while the essence of the former's consisted in excising a wedge from the femur by an instrument of his own, termed an osteotome, the mechanism and operation of which was shortly described. From all these methods good results have been obtained, *e.g.*, Von Nussbaum had thirty-one cases of Ogston's operation completed without losing a single patient—some of the cases now of six or seven years' standing; while one reads of deaths from sepsis after both femur and tibia osteotomy, recalling the adage, "*Le mieux est l'ennemi du bien.*" That perfectly good results may be looked for from Ogston's operation was shown by a case in Leyden of a man who previous to the section, two years ago, had a displacement of 37 mm. in his malleoli interni, and who was just the person to drift into suicide when hopeless of recovery. The inclination of both bones is now normal, and the joint-functions are unimpaired, as shown by his carrying a weight of 150 lbs. up a stair, and not long after made a march of nearly ten hours' duration.

The President thanked Heer Traub for his important communication in the name of the meeting, and a discussion followed.

Heer Aghina of Hoorn gave a paper "On the Significance of Aseptic Methods in Hernial Operations," wherein he depicted in lively colours the great benefits of this mode of treatment, and the dangers avoided thereby. In the remarks made after it, Heer de Meyer asked Heer Aghina's views as to alcoholic injections in irreducible hernia, he having lately used this plan with good results. Heer Aghina was opposed to operations where reposition was possible. Heer Lühns had tried twelve cases of injection, and in all had met with negative results, in some unfavourable. Heer Kapteyn thought injection might be indicated in large irreparable scrotal herniæ, but he had obtained few results from this plan.

Heer Schoemaker of Almelo gave a short treatise on antiseptics, wherein he advanced that the spray, bathing hands and instruments of operators, etc., were not only unnecessary, but disadvantageous, adducing three cases—one of wounded wrist by bursting of gun, healed without antiseptics; 2nd, resection of the elbow-joint, also cured; and 3rd, a patient suffering from multiple papilloma over the whole body. Heer Hermanides thought that in the *Platte land* antiseptics was needless, while Heer Traub considered that this was where it was most required. In such dangerous wounds, requiring tedious treatment, the certain should be preferred to the uncertain; and Dr Aghina argued against medical obstructionism.

Heer Kapteyn then showed one of Martin's elastic bandages, and spoke of its effectiveness in ulcers, varices, œdemas, eczemas,

dropsies in joints, patellar bursa, etc., in the most favourable terms. He showed, also, an instrument of Van Mathieu for application of gypsum bandages in cases of fractured femur, coxalgia, etc.; 2nd, a thermo-cautery which presented no greater advantage than less price; 3rd, bladder trocar; 4th, improved prostate catheter; 5th, improved *vasculateur de corps étrangers de la vessie*.

The last paper was by Heer Guye "On Adenoid Tumours in the Naso-pharyngeal Passage," which, did space permit, would be well worth translating, especially in its connexion with lachrymal conjunctivitis. The last line was, "*Hierna sluit de Voorzitter de vergadering*."

After this the President closed the meeting, the report of which reads very much like that of a provincial branch of the British Medical Association.

In No. 23 there is a paper on "Our Medical Examinations," by Dr J. A. Korteweg, in which he lays down the propositions—1st, Our medical scientific degrees are no scientific distinctions. 2nd, Our arts examinations give no security for practical usefulness. 3rd, Both kinds of examinations impede medical studies. On each head he gives a pretty lengthened disquisition; but of course it is difficult for a foreigner to say how far he makes out grounds for his discontent. He concludes with opining that the scientific examinations should be really scientific, fitting the candidate for the next impending practical trial, which should be made to bear on the necessarily limited practical knowledge of the student. In some connexion with this theme there appears a long paper in No. 3 of this year, on "The Present and Future of Medical Education," the author of which signs himself "Dr Autos," probably *nom de plume*. It commences with referring to the law of 1876, which, instead of concentrating, dispersed the higher medical institutions into the three high schools, which it designated *Reijks-Universiteiten*, the necessary consequence of which was an important increase in the number of professorates, and a corresponding national expenditure on this head. The last-mentioned circumstance, it appears, has given rise to much concern in the *Tweede Kamer*, or second branch of the legislature. Every year complaints were made over the heavy expense, the great number and superfluous branches taught by professors. It has now become a general opinion that three completed universities, fully equipped according to the demands of the age, surpass the financial capacity of the Netherlands. This persuasion had taken no definite shape till the "*Staats-Begroeting voor 1883*," where discussion is giving place to actual steps being taken. The first was the resolution to do away with the post of Instructor in *Æsthetics* in Leyden, and the second a motion by Heer Scheepman that a diminution of the number of the universities is desirable.

That the present university equipment is in no way superfluous



is shown by a letter read by the Home Secretary in the Chamber-session of 13th December 1882. The question was the vote of 130,000 gulden for the construction of a pathological laboratory at Leyden, so as to render instruction practicable in that important branch of study. The danger of the vote being vetoed by the Chamber was great. The epistle quoted was written by one of the professors, who stated that the post-mortems were held in the so-named sectio-house, next to the clinical ward, in which apartment the half of the students could not find standing-room; indeed, there was proper accommodation for only a fourth of the number. The vote was then unanimously accorded. Dr Koster of Utrecht, in a pamphlet, controverts the statement that an annual one and a quarter million gulden was any dreadful expenditure for the three universities, but a very moderate endowment compared with three similar establishments in Germany. It was also stated that for the military and civil requirements from ninety to a hundred new doctors were yearly called for. If reduced to the number of two, and each of these educating one hundred students annually, the market would be overloaded. Accustomed as we are to the wholesale inundation of studious youths flooding the courts and halls of our colleges in shoals, we are apt to regard the Netherlands as quite in the retail line of business.

Dr Dompeling of Utrecht has a most important paper in No. 49 of last year, entitled "Tegenwoordige Levensduur der Medici in Nederland,"—"On the Present Duration of Medical Life in Holland." He begins by quoting Voltaire's saucy joke, "Je ne connais rien plus ridicule qu'un médecin que ne meurt pas de viellesse!" To this he smartly answers, "Je ne connais rien plus ridicule qu'un philosophe qui dit des bêtises." He knew, or must have known, that no calling or class in society have their life and health so much exposed, in their ordinary course of life, to daily and nocturnal dangers, so much so that examples of longevity are very seldom found among them. Especially the younger champions of science, not yet come to the flower of their vigour, are cut down before the enemy whom they seek to combat with every energy of mind and body. And how can it otherwise be? A life full of troubles, of care, and unrest, the frequent presence in habitations and places full of infection and danger-working influences, a continual exposure of their own life in preservation of the lives of others, constitute many obvious reasons for their untimely deaths. *Alios curando moriuntur*. As of the candle can it be said of them, *Aliis inserviundo consumuntur*. It is related of Louis XIV. that he survived forty of his physicians.

In evidence of the low point of average longevity occupied by medical men, Caspar has drawn up tables which show that of those who have attained 70 years and above, in 100 clergymen there were 42, and of 100 doctors only 24. Some years later (in 1853), Dr G. Schneider gave a treatise on the life-duration of various



ranks and classes in Bavaria. It was an examination of 804 Catholic, 1145 Protestant clergymen, 989 medical practitioners, and 1274 schoolmasters, who were then in life. These cyphers, equally reduced to 100, gave of Roman Catholic and Protestant pastors and teachers 20, 21, and 22 older than 54 years, while only 9 medicals had passed that age. Above 60 years, the former ranks displayed 13, 12, and 12; of the latter, only 4.

In the *Medical Times* of 14th March 1881, a statement is made which is no improvement on the Bavarian statistics. It is there averred that of 100 Protestant ministers of 50 years of age the number was 53, of professors 41, of lawyers and magistrates 39, of Catholic priests 34,<sup>1</sup> and of 104 doctors only 26 had reached the age now mentioned; 74, or three-fourths, had sunk before attaining it.

Dr Dompeling made some inquiries as to the average life-duration of medical men in the Netherlands, but found no data to assist him from the life assurance companies. In the absence of such, he collected all notices of deaths in *Het Nederlandsch Tijdschrift voor Geneeskunde*, and, by making an average, some light on this point might be obtained. Another way suggested itself. In the official lists of licensed practitioners, the year and also the day of their appointment to office were published. By comparing their ages at this date with that of their registered decease might be elicited their life-duration, seeing that 24½ was the average age when placed in their respective offices. He thus collected 180 cases, and taking civil, military, and marine medical officers together, he believes that not more than 200 died during the last five years. Of the above-mentioned number of medical gentlemen deceased, he found in

|           |                             |                             |
|-----------|-----------------------------|-----------------------------|
| 1876, 34; | collected ages, 2020 years; | average of years each, 59·5 |
| 1877, 39; | 2606                        | 66·8                        |
| 1878, 42; | 2631                        | 62·6                        |
| 1879, 34; | 2102                        | 62                          |
| 1880, 31; | 2000                        | 64·5                        |
| 180;      | 11,359                      | 63                          |

In that space of time, 5 years, there died—

|                                 |    |
|---------------------------------|----|
| At the age between 20-30 years, | 2  |
| 31-40                           | 13 |
| 41-50                           | 19 |
| 51-60                           | 26 |
| 61-70                           | 61 |
| 71-80                           | 39 |
| 81-90                           | 17 |
| Above 90                        | 3  |

<sup>1</sup> The worthy Roman Catholic clergyman of an adjoining parish once told me, "La vie d'un prêtre est bien triste." It might have been mournful, but in his case it was by no means short.

These were:—In 1877, Dr Jelle Banga of Franeker, 90½ years, appointed 18th November 1807. In 1877, Dr J. T. Reiche of Zutphen, æt. 91; and Dr H. Repping at Middelburg, æt. 96, appointed in 1810. There were thus 59, or one-third, who had passed their 70th year. Of these, in the country districts were settled 25; in small towns, 15; in large towns, 19. To glance from the dead to the living, he found, of 109 practitioners living on 1st January 1881 in the province of Utrecht—

|                           |   |   |   |   |       |
|---------------------------|---|---|---|---|-------|
| Aged from 28 to 30 years, | . | . | . | . | 7     |
| "      31 to 40   "       | . | . | . | . | 11    |
| "      41 to 50   "       | . | . | . | . | 31    |
| "      51 to 60   "       | . | . | . | . | 20    |
| "      61 to 70   "       | . | . | . | . | 23    |
| "      71 to 80   "       | . | . | . | . | 11    |
|                           |   |   |   |   | <hr/> |
|                           |   |   |   |   | 109   |

Taken collectively, these individuals had lived 5644, averaging 51·8 years apiece. They all hoped to live a little longer. 63 and 64 of an average age, and the observation that one-third of the 180 had survived their 70th birth-day, while only 15 had succumbed before their 40th, is a highly favourable and encouraging view of the case. But there is this to be taken into account, that no fatal epidemic had prevailed during the five years in question, more especially no typhus, the most formidable enemy of young doctors—as witness the epidemic of 1846–47 in Utrecht, when eight or nine, mostly junior practitioners, fell before it. After this comes, perhaps, scarlatina, but very seldom cholera. Of small-pox we don't speak, as no sensible, far-seeing man ever dies of this, and all sensible men get themselves repeatedly revaccinated in the course of their professional career. Diphtheria is an ill antagonist of medicals, as cases of infection thereby have occurred among them; yet none fatal have been mentioned here, although quoted repeatedly abroad.

"To conclude, we may be satisfied with the above cyphers, but we should strive after higher; for though in our country the same expression may be applied to us that Voltaire made, viz., that in the whole of France not one medical centenarian could be found, it is not impossible that some one of us may yet claim that high age.

"Let us apply to ourselves the proverb—*Alis inserviando floremus!*"

A good part of each number of this publication is taken up with "Wetenschappelijke Mededeelingen."—scientific communications, among which Dr Hanlo's account of a double living monstrosity may be adduced, belonging to the rubric of "Xyphodymes." According to Geoffrey Saint Hilaire, it is of male sex and five years old, born near Turin, and by spiritual authorization doubly baptized, the right individual John, the left James. This being

has two heads, four arms, two chests, one abdomen, and one pair of legs,—in a word, double above, single below. The chest connexion begins about the sixth rib. There are two hearts, four lungs, two stomachs, two duodenums, while the umbilicus, the anus, and genitals are single. The development on both sides is evenly, but the left leg shows *pes varus*. Their appetite for food is independent, and each satisfies it separately: the call to sleep is also separate; the mental development is similar. They speak Italian, French, and German. Their aspect is pleasing. According to Dr De Maurens, very few of such cases attain maturity. History records one full-grown that was maintained by James IV. of Scotland as court fool. The left party was gleg and bonnie, the right *ill-faured, misleart*, and *druckensome*—a peculiar instance of an ill-assorted union. Virchow gave, in *Jahrgange*, 1875, a classical description of the double pigmies Millie and Christina. Sevres of Paris gave a treatise on the eight months old monster Ritta Christina, whose remains are preserved in the Parisian Museum. St Augustine, in his work *De Civitate Dei*, liber xvi. c. viii., thus speaks: “Ante aliquot annos, nostra certa memoria, in Orientes duplex homo natus est superioribus membris, inferioribus simplex: nam duo erant capita, duo pectora, quator manus, venter autem unus, et pedes duo sunt uni homini, et tam diu vixit, ut multos ad eum videndum fama contraheret.”

Another division of the journal is that devoted to reviews of books—“Boekaankondiging.” In discussing the qualities of publications, reviewers must in justice make reference to the sore bits as well as the sound pages of the works on which they turn their mental lenses; but I should be sorry if my pen were fitted with such a neb as that which some of these Dutch gentlemen seem to possess. A certain Dr A. Bastings, who has rashly published in Brussels a work in 8vo, 100 pages, on *Réforme médicale, essai d'élever la science médicale au niveau des sciences physiques*, also *Guérison d'un cas grave de phthisie pulmonaire par électrisation*, and is perfectly scarified by the scalpel of the Batavian Rhadamanthus who signs himself W. K. It is certainly amusing.

“Berigten”—the intelligence department—contains two divisions—“Buitenland,” the foreign, extracts from contemporary English, American, and German medical literature; 2nd, “Binnenland,” domestic, occurrences affecting the profession in Amsterdam and the provinces; and finishes by hospital records and records of deaths in statistic form, their numbers and nosology. Altogether I may conclude with the statement that the journal now introduced to the Scottish medical public is in all respects highly commendable, and such as to encourage further investigation into a language and literature which was better known to our fathers of six generations back than it is to their modern representatives.

Along with the Dutch periodical there came No. 42, vol. ii., of the *Deutsche Medicinal Zeitung* of Berlin, which we may regard as



a favourable specimen of that class of North German publications. It commences with a detail of the trial of a butcher who was accused of using unwholesome food in the manufacture of sausages, but who got off with "Not proven," the flesh of naturally dead and unborn animals not being forbidden by the "Nahrungsmittelgesetz." The regulations affecting Kellerräumen, or cellar-abodes, are described, and, if efficiently carried out, seem well adapted for the preservation of the health of such as inhabit them. A long list of various materials for colouring, the use of which in colouring articles of food or enjoyment, is published as forbidden by law. To this division follows an extensive periscope, displaying extracts of practical observations culled from the most varied sources. Among others, a column is filled by Dr Hoppe's remarks on aqua carbolica when applied as lotion to ulcers and wounds, which his experience did not lead him to confide in, nor more in carbolized oil on wadding. He found it more of an irritant than a healer, which in a number of cases he had to replace by solution of lunar caustic. The writer was simultaneously led to the same conclusion by observing the disadvantageous effects of aq. carbolica in many cases of varicose ulceration.

The above author gives particulars of a case of fœtid breath arising from catarrh affecting the mouth, and originating in reddish masses of hardened mucus depending on the Schneiderian membrane, and only partially removable by brisk nasal expiration. Sulphur baths and quinine wine were required to accomplish a cure. Mr Wood's case of arterio-venous aneurism of thirty years' standing is translated at length from the *Lancet*, as also is Dr Bell's case of coin in air-passages treated by inversion of the patient, from the *Edinburgh Medical Journal*, 1881, p. 1104.

The French medical press supplies four cases of idiopathic ascites in 13, 20, 13, and 15 years old females, in the three first of whom purgatives, diuretics, and diaphoretics were of no avail till paracentesis was performed, and 10, 20, and 14 litres of ascitic fluid withdrawn from them, and complete cure ensued. In the last, the use of pulverized iron, squills, and digitalis brought about abdominal declension and ultimate cure. We have also Lewin's and Rosenthal's researches on chrysarobin and its relations to chrysophanic acid, both derived from araroba, or Goa powder, which was brought to view by Balmanno Squire, but which was, I think, somewhat earlier described by Silva Lima, whose classical papers on that subject I remember reading in the *Gazetta Medical da Bahia* with extreme interest; and, with other practitioners who have daily to contend with eczematous and scaly skin diseases, regard it as an important addition to our armamentarium. Medical news and minutes of meetings of societies fill up the remaining portion of this contemporary, of which we may say that a very large amount of professional information is combined in small limits and at a moderate price.

(To be continued.)

# VI.—STATISTICS OF TWO HUNDRED AND FIFTY CONSECUTIVE MIDWIFERY CASES IN PRIVATE PRACTICE.

By ANDREW S. CURRIE, M.D., M.R.C.S. Eng., Lydney, Gloucestershire.

(Read before the *Edinburgh Obstetrical Society*, 11th July 1883.)

IN his work on the *Mortality of Childbed*, Dr Matthews Duncan remarks, in speaking of the comparative value of statistics, "If the data of private practice could be got, they would be the best. But, as yet, no satisfactory data of this kind are procurable on a large scale." He elsewhere states his opinion that this is a very questionable source of information for various reasons; for example, because the memory is a frail and treacherous source of statistics, and, above all, because medical men "have an indisputable tendency, and an inalienable right, to say nothing of what looks like want of success. Suspicion naturally attaches to data remarkable for apparent success."

Now, in submitting this series of cases to the Obstetrical Society, I desire, in the first place, to say that I offer them as a very humble contribution to those statistics which Dr Duncan thinks might be serviceable under certain conditions. They are taken in regular series, without any omission, from the first case, which I attended on coming into this neighbourhood, down to the 250th case, which I attended last March. They are, therefore, not cases specially selected for the mere sake of making a show and acquiring κῦδος. In the second place, I can vouch for the accuracy of this report: the cases are not narrated from memory, but are extracted from the obstetrical record, in which they are entered from time to time as they occur. When any doubtful point arose, it has been my endeavour to note it faithfully at the time. The register I use is that published by Messrs Smith & Co., Long Acre, and is the form recommended by the Obstetrical Society of London. Of this series of cases the vast majority (over 220) have been attended by myself. Some of them are cases to which I was called in consultation.

It is with devout thankfulness that I am able to say that, hitherto, there has been no maternal death. This happy result is probably not due to any special obstetric skill, but to the fact that in a healthy country place like this the danger of childbed is reduced to a minimum,—the process of parturition, one might say, becomes more nearly a physiological process. Another point which must be borne in mind in helping to account for this successful series of cases, is the important fact that there has not been any very serious epidemic during the period in which these cases occurred. A very severe epidemic of scarlet fever, which almost decimated the children, raged in this neighbourhood during the autumn and winter of 1877, prior to my beginning practice in Lydney, and, as might be expected, there occurred then some fatal cases.



Le Fort, quoted by Dr Duncan, estimates the maternal mortality in English private practice at only 2 or 3 in 1000; but it is probable, as Dr Duncan says, that this estimate is quite incorrect. Were it the case, it is not, perhaps, too much to say that it would go to prove that the chances of woman's life would be improved by pregnancy and parturition. Dr Duncan gives, among others, his own statistics of private practice, 1 death in 105 cases; Sir James Simpson's, 4 in 180; Dr McClintock's, 1 in 108; and, as a general result, he estimates the maternal mortality of private and hospital practice at 1 in 120. If this estimate is correct, and I would not venture to call in question so great an authority, the physicians to the Edinburgh Lying-in Hospital may congratulate themselves on their results, published in the seventh volume of the *Obstetrical Transactions*, the mortality of the extern and intern practice of that institution amounting only to 0.66 per cent. But I venture to say that the statistics which Dr Duncan quotes of the mortality of the private practice of himself and other eminent obstetricians is quite fallacious, for the very obvious reason that, from the fact of their being chiefly or entirely consultants, they encounter a very large proportion of abnormal and difficult cases. In fact, as he himself says, "It is quite possible that an hospital, or a practice with a high mortality, may be specially successful. For it may number among its items an extraordinary number of cases of danger and difficulty and the figures may be so small that a very little addition to the deaths will have a very remarkable influence in increasing the average mortality in it." I have said that in a healthy country district parturition tends more to the physiological than to the pathological type; and in support of this view, if indeed it requires support, I would point out the fact that the proportion of difficult cases in my practice has been, as nearly as possible, 9 per cent.; in the Maternity Hospital reports for 1881-82 the proportion is slightly over 16 per cent. Again, as regards the puerperium, in none of my cases has there been any septicæmic condition, a trouble which is more or less common in towns; and, further, in none of them has there been a persistently high temperature.

The following is a short summary of the more difficult cases:—1 placenta prævia delivered by podalic version; 1 transverse, right-shoulder presentation; 1 embryulcia for hydrocephalus; 5 breech cases; 1 footling, with prolapsus funis; 1 head (R.O.A.), with prolapsus funis; 1 forehead presentation; 7 cases of twins; 2 footling cases; 25 long-forceps cases; and 6 in which short forceps were used. One case gave rise to very considerable difficulty from the patient being paraplegic. There were 4 cases of post-partum hæmorrhage, 2 of them very excessive; and 5 cases of accidental hæmorrhage.

It would only be tiresome to the members were I to give long details of these cases, but a few short notes regarding some of them may not be considered out of place.



With regard to the case of placenta prævia, the recovery of the mother was little short of a miracle, as the midwife in attendance allowed the patient to flood for twenty hours before she thought it right to send for me. On my arrival, the patient was blanched and the pulse was small and rapid. The os was very rigid, dilated only to about the size of a shilling, and the placenta presentation was complete. With the kind assistance of my colleague, Dr Aitken, I effected podalic version after rupturing the membranes in order to arrest the hæmorrhage, which was threatening to reduce the patient to a hopeless condition. In the first instance I had employed the tampon to dilate the cervix. The child was dead.

In the *Practitioner* (vol. xxx. p. 371) there is an account of a method of treatment of placenta prævia which, in the hands of Dr Hofmeier, has yielded marvellous results. "He scarcely ever uses a tampon; and as to the cervix, his rule is only to wait till clear symptoms of labour set in, *i.e.*, either uterine contractions or funnel-shaped dilatation of the cervix. He then proceeds as actively and speedily as possible. . . . The Wigand - Braxton - Hicks' method was employed in thirty cases. . . . The feet having been guided to the os are seized, and by firm traction the buttocks effectually stop the hæmorrhage." In central position of the placenta, Dr Hofmeier approves of perforating it and bringing the feet through. Of 37 cases 1 mother was lost—a most remarkable and enviable result.

The case of shoulder presentation was remarkable on account of the child spontaneously righting itself while the woman was changing her bed by my direction, in order to get into a more accessible position.

The case of embryulcia was in a multipara. I was called to it in consultation by my late friend Mr Tuckwell. The head was low down, and was evidently too large to pass without rupturing the perineum extensively. The woman was much exhausted, and the pains were becoming very feeble. When the head was perforated there was a sudden and copious gush of water, and delivery was easily completed. The patient made an excellent recovery, and has since given birth to a healthy child.

Of the twin cases only two are specially deserving of note. The first was the worst case of hæmorrhage it has ever been my lot to witness. The woman was a multipara, her previous labours having been very favourable on the whole. She had been flooding with every pain for about six or eight hours before I was sent for. I at once had the woman placed in bed (she had been sitting on the edge of a chair with a chamber utensil placed under her to catch the discharge). On examining, I found a footling presentation, the os being dilated and the membranes tense. I immediately ruptured the membranes and drew down the child, blood escaping continuously in the most alarming manner. The placenta was expelled immediately after the child, but the hæmorrhage continued. On

examining I found a second child presenting right occipito-anterior. I rapidly turned and delivered, and removed the second placenta by expression. The hæmorrhage continued more or less for two hours, but ultimately yielded to treatment by cold compression and the internal administration of ergot. Both mother and children are alive and well at the present time.

Here, perhaps, though it is somewhat out of place, I may notice the second severe case of post-partum hæmorrhage. It occurred in a young woman with, probably, a specific taint. She had only been pregnant once before, and that was seven years prior to this occasion. The labour appeared to be natural in every respect, and I had left the house and returned home, but in an hour I got an urgent summons to return. On my arrival I found the patient pallid and faint. The uterus was soft and relaxed, and blood was gushing profusely. After considerable difficulty cold and compression arrested the discharge, and convalescence afterwards was uninterrupted.

In any cases of post-partum hæmorrhage which may occur in my practice in future, I shall, in the first place, wash out the uterus with a stream of warm water, thus giving it an opportunity of responding to a reflex stimulus; and then, should this process prove insufficient, I should, without any hesitation, inject solutions of perchloride of iron, as recommended by Dr Barnes. That the danger of this proceeding has been much over-estimated has, I think, been conclusively proved by Dr Pollard in an able paper in the *British Medical Journal* (vol. i. 1880, pp. 619, 657).

The other case of difficulty from twins occurred from locking of the heads. I managed, after repeated efforts, to disengage them, but the first child had its head and face crushed out of all human semblance.

Several cases of breech presentation presented points of difficulty in the way of arrest of the head at the brim, etc., but they are not of sufficient interest to warrant my going into details. I have classed them with other cases of difficulty, owing to this fact.

Of the two cases of prolapsed funis, the first was a footling, the second a normal head presentation. In the former, postural treatment was employed, but the prolapse recurred with every pain. The child was dead, the cord having ceased to pulsate for some time before delivery was completed. In the second case replacement of the cord was out of the question, as the head was low down and labour well advanced before I saw the case.

The cases of accidental hæmorrhage all did very well. In each one I employed the tampon to effect dilatation of the os. The most anxious case was one that occurred last January. The patient sent for me, a fortnight before delivery took place, on account of slight hæmorrhage. I was not summoned again till the 14th. On arriving at the house about 6 P.M. I found that the patient had suddenly been seized with severe flooding three hours before.



There were no uterine contractions. On examining I found the os rather larger than a shilling. The placenta was situated low down on the right side, and I could insert my forefinger underneath a detached portion. The presentation was head, right occipito-anterior. I plugged the os and vagina, applied a binder, and administered a dose of ergot. In an hour I found that the hæmorrhage was recurring, but there was still total absence of pains. I withdrew the plug, forcibly dilated the os with my fingers, and ruptured the membranes. The hæmorrhage continued in spite of these measures, so I seized a foot, turned, and delivered rapidly. The child and mother both did well.

With regard to the forceps cases, I would remark that in a country place there is a strong objection to the use of instruments, and in most cases nothing but the most obvious necessity for interference will induce the patient or her friends to agree to recourse being had to this procedure. There are many cases in which I would most gladly interfere, both on the patient's and my own account. I now always employ Dr Barnes's forceps, on account of the ease with which they are adjusted and locked.

None of these forceps cases can fairly be termed exceptional; they therefore do not call for special note or comment.

*Infantile Mortality.*—Of 257 children, 22 were still-born or died within a few hours. Ten of these were more or less putrid. Amongst the causes of death I may note the following:—Placenta prævia, prolapsis funis, embryulcia, compression of cord, etc.

In conclusion, may I be permitted to suggest that the keeping of accurate records of private practice, and the publication of such records from time to time, would add to the interest and value of our Society's Transactions. For myself, I find it not only interesting, but instructive, to look back upon work done and to meditate upon it. Even from the simplest cases one acquires some knowledge and learns to improve upon former practice.

As I have already said, I offer these cases as a humble contribution to the statistics of private practice, and in doing so I ought to add my apologies for the fragmentary and somewhat desultory character of this paper.

## VII.—TWO CASES OF BRAIN-TUMOUR.

By R. B. MITCHELL, M.B., C.M., Assistant-Physician, Royal Edinburgh Asylum, Morningside.

THE following cases, which present some interesting features both clinically and pathologically, occurred in the Royal Edinburgh Asylum within a very short time of each other.

CASE I.—W. W., æt. 40, married, a labourer, was admitted on 20th July 1882.

*History.*—The patient was a man of herculean strength, but



he had been from his youth very drunken and profligate. An early marriage did not bring about any improvement in his mode of life. At the age of thirty he went to America by himself, and stayed several months there, away from his wife and children. Within a year after returning home he suffered for some time from an ulcerated throat and severe pains in his back and head, which were noticed to be worse at night. But he seems, on the whole, to have had good health until about five years after his return home, when one day, while seated in his chair, he suddenly fell to the floor unconscious (without convulsion), and was found to have lost the power of his left limbs. This attack was followed by another, similar in character, on the same side, eight months before his admission to the Asylum. After the second attack he grew stupid and forgetful, became wet and dirty in his habits, and when the power of locomotion returned to some extent, he shuffled vaguely out of doors in a semi-nude state if not carefully watched.

The hereditary and family history showed no predisposition to insanity or any neurosis. The patient was the father of ten children, of whom four had died from bronchitis in infancy, and five are alive and healthy. The tenth child was thin and weakly from the time of its birth, suffered from "snuffles," and died in a few days. No rash was observed on its skin.

*State on Admission.*—Patient was a tall, large-framed man, being over six feet in height, and weighing  $12\frac{1}{2}$  stone. The left pupil was dilated; both were contractile. The sensory and motor functions were impaired very much on the left side of the body; he trailed the left leg, and often seemed about to fall. The articulation was very indistinct, and the tongue was protruded to the right. The patellar tendon-reflex was exaggerated on the left side. Lungs, heart, and kidneys healthy. Mentally there was much enfeeblement, and his face was "dazed" and vacant. He imagined he was in Glasgow, and believed he had just seen his mother, who had been dead for twenty years.

For the first two months following admission he improved a little as to his physical state, but rapidly grew more feeble afterwards, and was confined to bed, where he lay quite unable to do anything for himself. Death took place on 15th March 1883.

*Autopsy* thirty-eight hours after death. (Weather very cold.) Skull-cap unusually large, very heavy, softer than normal, but symmetrical in shape. Dura mater healthy. Pia mater remarkably tough and thickened, especially over the vertex, where it was opaque and grayish-white. It stripped off quite freely from the subjacent gray matter. Gyri somewhat atrophied generally. Vessels at base of brain slightly thickened.

At different levels in the left corpus striatum, three blood-clots were found, ranging in size from a pea to a small hazel nut. Situated under the posterior part of the floor of the left lateral ventricle was a tumour three-quarters of an inch in diameter,

globular in form, firm and yet resilient in consistence. On section it had a pale yellow colour, except near the circumference, where a gray, translucent, narrow zone existed; and it was well defined, apparently, as to its contour. In the substance of the right corpus striatum, and immediately beneath the lining membrane of the ventricle, was a shrunken, yellowish-brown cavity the size of a filbert—evidently the site of a former hæmorrhage.

The encephalon, without the dura mater, weighed 67 oz.

The aorta, near its origin, presented several flat nodular elevations of the lining membrane.

Other organs healthy.

### *Microscopical Examination.*

After hardening in methylated spirit and Müller's fluid (1-3), sections were taken from the tumour, the pons varolii, the parietal and occipital gyri, and the corpora striata.

The tumour consisted of a fibrillated stroma and two kinds of rounded cells. The smaller cells were from about 1-3000th to 1-2500th of an inch in diameter; they were very numerous towards, but not at, the centre of the growth. The larger cells were about 1-600th of an inch in diameter, stained dimly, and had a large, well-marked nucleus; they were not nearly so numerous as the former, and were chiefly about the periphery. The stroma was very dense in the centre, but much more open in structure towards the circumference. The vessels in the more central parts of the tumour showed well all the stages of an obliterative arteritis. The first step seemed to be the deposit of the small cells between the coats of the vessel, presenting very much the appearance seen in Fig. 3; next, the development of these into a fibrous-looking structure consisting of concentrically arranged wavy lines, forming a dense and impenetrable mass filling up the whole or nearly the whole of the lumen; then contraction and shrinkage of the whole structure (Fig. 5); and lastly, in some instances, the development of new vessels in the obliterating material.

The "arachnoid" cells were numerous, large, and distinct in the border of brain-tissue lying between the morbid growth and the pia mater of the base of the temporo-sphenoidal lobe; and here, also, some infiltration of the small cells was seen.

*Right Corpus Striatum.*—Sections, which included the bed of the old hæmorrhage, showed some small vessels in its vicinity with their coats three, four, and five times their normal thickness, owing to the growth of new cells in their tissue, the calibre being proportionately diminished. In at least one instance, an artery, about 1-25th of an inch in diameter, was seen obstructed by a thrombus, the *intima* being thickened round one-half the circumference of the artery.

*Right Occipital Pia Mater.*—Some small arteries were seen



whose lumen was partially obstructed by vegetations to which minute collections of blood-cells adhered.

In most sections were seen quantities of blood-pigment, some thick-walled vessels, other vessels crammed with blood-cells, and lastly, some unstained patches of a ground-glass appearance.

CASE II.—J. W., 52, married, engine-fitter, was admitted to the Royal Edinburgh Asylum on 3rd March 1883.

*History.*—He had been given to liquor to some extent. Some years ago he received a heavy blow from a hammer on the left side of the head, and had to stay in hospital for a short time. But he seems, on the whole, to have had fair health, generally speaking. He married at thirty years of age, and was the father of six children, of whom four are alive and healthy. His wife had two abortions, one of these occurring in her first pregnancy. The family history showed the presence of insanity, phthisis, and scrofula.

About two years ago he began to suffer severe pain at one spot in the right temple, and not long afterwards in the left temple also. The pain was described as being "deep in the head," and at times most severe, especially at night.

Fifteen months ago he had a "convulsive fit"—the first he ever had. It did not follow a drinking bout, and he went to work next day as usual. After this he had several fits at irregular intervals, and the headaches continued. He was treated by iodide of potassium, and the fits diminished in number and severity thereafter. He was able to attend to his work until a month before admission to the Asylum; and about a fortnight before his admission he grew restless and sleepless at night, and muttered a great deal to himself. These symptoms grew worse, and then he threatened violence to his wife and children.

*State on Admission.*—Physical development fair; complexion muddy and sallow; locomotion slow, and he dragged the right leg somewhat. Pupils normal; sensory and reflex functions normal. Tongue somewhat tremulous on protrusion; articulation markedly thick and slurred. Mitral and aortic regurgitation were present. Temperature 98°·8.

Mentally the predominant features were those of enfeeblement and exaltation. His memory was much impaired, and he was very slow and confused in his ideas.

During the first week of his stay in the Asylum he was generally very restless, and was sleepless and excited at night. He once struck an attendant without any apparent reason. At the end of the week he had a fit, after which there was some diminution of power on the right side of the body for some days. During the second week he was more restless and excited than before, and at night used to try to tear open the window-shutters of the dormitory where he lay. Then a change occurred. He became quiet and civil in his demeanour, could



answer questions with a good deal of intelligence, made himself useful in the ward, and was gaining in flesh. He also slept pretty well at night. But at the end of eighteen days he took a severe fit in the early morning, and this was followed by a number of others at intervals of a few minutes. For four days he continued to suffer, with very brief intervals, from these attacks, and on the morning of the fifth day he died comatose. All the seizures observed had the characters of "Jacksonian epilepsy;" and further than this it is only necessary to say that the convulsions began always in the right cheek, and extended thereafter successively to the right arm and right leg.

*Autopsy* forty-six hours after death. (Weather cold.) No sores, scars, cicatrices, or nodes. Skull-cap thin, adherent to dura mater over the left frontal lobe at the posterior part of its convexity. Dura mater adherent to the soft membranes over the posterior part of the second frontal gyrus of *right* side; and in stripping it off, a tumour the size of a hazel nut, and taking the shape of the gyrus, was found growing from the deep surface of the pia mater. On section it was seen to have precisely the same characters as that described in the preceding case.

Over the middle portion of the ascending parietal and ascending frontal, and the posterior portions of the first and second frontal gyri of the *left* hemisphere, the meninges were greatly thickened and glued firmly together, the whole forming a tough, firm layer about one-eighth of an inch in depth, and presenting a yellow colour on section. Over an area the size of a crown-piece this structure was strongly adherent to the subjacent gray matter, which was deeply torn when the attempt was made to strip off a small part of it. At one or two other spots the pia mater was adherent to the gray matter, and laceration of the cortex resulted when the membrane was stripped off. The brain substance was very pale and soft beneath all these areas.

There was no trace of disease or injury of the skull-cap at any spot.

The right temporo-sphenoidal lobe was soft almost to diffluence. The base of the right frontal lobe, near the olfactory bulb, had an area of soft reddish material the size of a shilling. Encephalon weighed 55 oz.

*Heart.*—The mitral and aortic valves were incompetent; the aorta presented several nodular elevations near its origin.

#### *Microscopical Examination.*

Sections were taken from the convolutions (some including a part of the greatly thickened meninges), the tumour, and the corpora striata.

In the convolutions there was a tendency to yellow granular degeneration of the pyramidal nerve-cells, in the frontal lobes especially. The blood-vessels were somewhat thickened in their

coats at a few places; and in the neighbourhood of the tumour some small vessels had their coats greatly thickened by infiltration of the small cells (identical in character with those described in the preceding case), and their calibre correspondingly diminished (see Fig. 2). Large hæmatoidin granules were very common, and many vessels were crammed with blood-corpuscles.

*Corpora Striata*.—Vessel walls greatly infiltrated with small cells, and their calibre diminished.

The tumour found in the right frontal lobe had essentially the same structure as that described in the preceding case. The arachnoid and pia mater over it showed great hyperplasia of the tissue elements, and were infiltrated with the small cells. Indeed, no very sharp line could be drawn between the pia mater and the tumour, the latter seeming to form a direct and continuous out-growth from the membrane. It spread inwards, involving the nerve elements as it went, becoming deposited among them, and finally replacing them—not making a bed for itself by pushing the brain tissue before it. Near the pia mater, an artery, about 1-40th of an inch in diameter, had been cut across, and exhibited the characters of an obliterative endarteritis, as seen in Fig. 1.

Sections taken through the large patch of thickened and adherent meninges, on the left hemisphere, showed very great hyperplasia of the tissue elements, which were also infiltrated with new cells, and contained very thick-walled vessels. The brain substance beneath this diseased area had a loose, reticulated appearance, and the characteristic small cells were extremely numerous throughout it. The vessels in and near this part of the brain had their walls extensively invaded by the small cells, and their calibre correspondingly diminished.

*Commentary*.—In the first of these cases, a noteworthy fact is, that most of the usual symptoms of brain-tumour, such as convulsions, headache, vomiting, and impairment of special senses, were absent. This may be accounted for, perhaps, in part, by the situation of the tumour, imbedded as it was in the substance of the temporo-sphenoidal lobe, where it did not press on any cranial nerves or upon any other structure so as to cause such symptoms.

The patient's brain is one of the heaviest on record. Dr Morris has described a brain that weighed 67 oz.,<sup>1</sup> which, so far as I can ascertain, is the heaviest described in this country. Lately mention has been made of a brain that is said to have weighed 73½ oz.<sup>2</sup> The owner was a Chippewa Indian woman, who was hydrocephalic and a dwarf.

In the second case, it will be noticed that the meningitis on the left hemisphere had implicated an area of the brain cortex which includes a considerable part of the motor area as defined by Professor Ferrier; and it seems without doubt that this was

<sup>1</sup> *Brit. Med. Journal*, 1872.

<sup>2</sup> *Boston Med. and Surg. Journal*, Feb. 22 1883.



the cause of the discharging lesion which gave rise to the unilateral convulsive seizures from which the patient suffered.

It is sometimes difficult clinically to decide whether one has to deal with general paralysis or syphilitic disease of the brain. The two conditions may, of course, co-exist, and this appears to have been so in J. W.'s case.

In considering the pathogenesis of these cases, the question forced upon one is, "Are these examples of syphilitic insanity?" In neither could a thoroughly unequivocal history of primary syphilis be obtained, but, on the whole, the evidence of it seems fairly conclusive. One has to bear in mind the following conditions taken together:—Case 1. The history of a very drunken and loose life; then some symptoms suggesting the presence of secondary syphilis, followed in time by a sudden hemiplegia (apparently of embolic origin), occurring in a man originally healthy, and only thirty-five years of age. Then, also, there were indications of congenital syphilis in one of his children. Lastly, there are the characters of the tumour, which had all the appearance of an *old* gumma of the brain. Tubercular tumour of the brain is, in some cases, apt to be mistaken for this variety, but the vessels are not affected in tubercle. The following conditions, on the whole, seem to show that this tumour was a syphilomatous one:—1. The patient's history and his age. 2. The absence of hereditary tendency to tubercle; and of all signs of tubercle *post-mortem*. 3. The firmness and want of friability in the tumour. 4. The concentric arrangement of the small cells around the vessels<sup>1</sup> (although this is not held to be specially distinctive of a syphiloma). 5. The very marked alterations in the coats of the small vessels in different parts of the brain.<sup>2</sup>

In the second case we have to keep in mind the following points:—1. The patient's wife had two abortions, one of these terminating her first pregnancy. 2. The manner of onset of the patient's illness, and the early occurrence of deep-seated intra-cranial pain, situated later on both sides of the forehead, and worst at night. This prosopalgia in the subjects of syphilitic disease of the brain has been specially alluded to by several authors.<sup>3</sup> 3. The characters and relations of the circumscribed areas of chronic meningitis. That limited areas, where the meninges are greatly thickened and agglutinated together, as a result of gummatous inflammation, are found *post-mortem* in cases where there is a clear history of syphilis, there is no doubt. Flechsig<sup>4</sup> has described a form of syphilitic meningitis. It is also said<sup>5</sup> that the thick and tough patches in the meninges of the cases described by Griesinger are not common in

<sup>1</sup> Ross, *Diseases of the Nervous System*, vol. ii. p. 557.

<sup>2</sup> Vide Dr Saundby's article on "Obliterative Enderarteritis, etc.," in the *Journal of Anatomy and Physiology*, vol. xvii. p. 185.

<sup>3</sup> *Journ. Mental Science*, vol. xviii. p. 607 (Abst.)

<sup>4</sup> *Ueber Mening. luet.*; Inaug. Diss., 1870.

<sup>5</sup> *Ziemssen's Cyclopædia of the Practice of Medicine*, vol. xii.





FIG. 2.



FIG. 3.



FIG. 1



FIG. 4



FIG. 5.



ordinary inflammation of the soft membranes of the brain. Spitzka<sup>1</sup> says that syphilitic meningitis differs in no essential respect from ordinary meningitis, "except in those rarer instances where the specific gummatous character prevails." In J. W.'s meninges, however, the process was of old standing, and if any gummatous characters had formerly been present, they had disappeared. (However, it must not be forgotten that there is a history of an injury to the same side of the head some years ago, and therefore the possibility of a purely traumatic origin of the lesion cannot be excluded.) 4. The characters of the tumour, which agreed essentially with those of the first-described one. 5. The changes in the coats of the small cerebral vessels.

The fact of no lesion that could be called syphilitic being found *post-mortem* in other organs in either case does not at all disprove the theory as to their syphilitic nature, for it is well known that skin affections of this class, and even changes in internal organs, may, after a time, leave no trace of their former presence in the tissues.<sup>2</sup>

#### DESCRIPTION OF PLATE.

- FIG. 1.—T. S. of an artery near pia mater, and surrounded by the tumour. The *adventitia* is thickened and infiltrated with the small cells. The *muscularis* is atrophied to some extent. The lumen, in which lie a few blood corpuscles, is greatly diminished owing to development of new cells between the endothelium and the fenestrated membrane, which appears hypertrophied. At X is seen a new thin-walled vessel developed in the growth between the lumen and the fenestrated membrane. X 350 (J. W.'s case.)
- FIG. 2.—L. S. of small vessel in right frontal lobe, showing infiltration of coats and separation of them by new cells, and narrowing of lumen. X 350. (J. W.'s case.)
- FIG. 3.—T. S. of small vessel of right corpus striatum, showing the earlier part of the obliterative process. X 350. (W. W.'s case.)
- FIG. 4.—T. S. of small vessel of tumour, obliterative process more advanced. X 350. (W. W.'s case.)
- FIG. 5.—T. S. of vessel near centre of tumour, in which cicatricial contraction and complete obliteration have occurred. X 350. (W. W.'s case.)
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#### VIII.—NOTES ON THE CASE OF AN OUTDOOR PATIENT OF THE MIDWIFERY DEPARTMENT OF THE EDINBURGH PROVIDENT DISPENSARY, MARSHALL STREET.

Attended by Dr CHAS. BELL, F.R.C.P. Ed., and assisted by Mr BAIRSTOW, L.R.C.P. & S. Ed.

WE were called in to assist a pupil of this institution who had charge of Mrs B. in her confinement. On making our examination, we found her in a weak and exhausted condition from long-con-

<sup>1</sup> *Insanity; its Classification, Diagnosis, and treatment*, p. 312.

<sup>2</sup> *Manual of Pathological Histology*, Cornil and Ranvier (English Translation), vol. i. p. 188, 2nd ed. Also, *Journ. Ment. Science*, vol. xxii. p. 314.



tinued labour. It was therefore necessary, for the safety of the woman, to use forceps to expedite delivery. The head being in the first position, it was easily extracted, but, from the diseased condition of the child, decapitation took place, thus giving rise to serious difficulty to complete the delivery.

On the second stage of labour being completed, the appearance presented that of an eighth month fully developed male child with an unusually distended abdomen, the genitals and scrotum being well marked with syphilitic taint. On removing the placenta it was also found to be in a diseased condition, breaking down on traction, and had to be taken out piecemeal. After labour was completed there was little or no hæmorrhage; pulse full and throbbing, which rapidly fell to a normal condition on our second visit. Our fears were, from the diseased state of the child and placenta, evil consequences might arise to the mother, and therefore precautions were taken to have the uterus washed out with a weak solution of Condyl's fluid, and we are glad to say the woman is now doing well.

This state of matters naturally excited our interest in endeavouring to obtain a history of her case. She was 27 years old, had been married 8 years, and had three children, apparently healthy and still alive, their ages being respectively 7, 6, and 5 years, and no difficulty at their births. The next pregnancy resulted in the birth of a dead child at the eighth month; the fifth was also born dead at the eighth month, and the sixth, being the case we now allude to. A post-mortem examination was made on the child. We found, 1st, length 16 inches; 2nd, circumference round abdomen  $14\frac{1}{2}$  inches; 3rd, occipito-mental circumference 14 inches. From the large amount of fluid the head contained, and from the quantity which oozed out,—viz.,  $4\frac{1}{2}$  ounces,—we believe hydrocephalus existed. Penis, prepuce enlarged, with well-marked syphilitic sore. Nails on hands and feet are wanting.

We regret that no reliable information could be obtained, either from the husband or the wife, to allow us to come to any definite conclusion to produce this state of matters,—thus leaving your readers and ourselves to form ideas of their own as to the cause thereof.

## IX.—THE DIAGNOSTIC AND PROGNOSTIC VALUE OF THE INITIAL RASHES OF SMALLPOX.

By ROGER M'NEILL, M.D., Colonsay.

(Continued from page 258.)

*The Petechial Rash.*—In this rash the colour of the individual spots is dark brown-red. When the spots are thickly set the colour has a tinge of blue or purple. In some cases the coloration, unless carefully examined, appears uniform; but in all cases, if

inspected minutely, the rash is found to consist of spots, irregular in size and shape, with ill-defined, faded borders. The size varies generally from pin's point to a small pin's head. The spots are in almost all cases found to vary in colour, the larger size being darker. This may depend on the fact that some spots are developing while others are fading. The colour of the petechial rash at the margin of the site occupied by it is generally more faded than elsewhere. Here also the individual spots are more scattered. The rash is quite persistent on pressure. The skin over it is smooth to the touch. As a rule, no irritation is caused by it.

The site chosen by this rash is very characteristic. It almost invariably selects the lower part of the abdomen and the groins to an inch or two below Poupart's ligament. More rarely it extends higher on the abdomen, and sometimes covers the sides up to the axillæ and the chest to the nipples. It is only in very exceptional cases that any part of the body is affected by this rash while the groin is free. I have seen this only in one case of pustular hæmorrhagic smallpox which proved fatal. Somehow I neglected to obtain further particulars of it. The petechial rash almost invariably ends inferiorly on the inner surface of the thighs, from one to two inches below Poupart's ligament. From that point the lower border runs in front of the thighs, upwards, outwards, and backwards, parallel to the ligament to about an inch above the trochanter major, and then upwards to about the middle of the crest of the ilium. The posterior and upper borders are not so well defined, as scattered spots extend further than the well-marked rash. As a rule, this rash does not reach further back than the edge of the latissimus dorsi, nor upwards further than the axilla and lower edge of pectoral muscles. It frequently does not extend much higher than the navel. Hebra<sup>1</sup> states that the petechial rash is invariably confined to a space bounded above by an imaginary line at the level of the navel. My experience would lead me to believe that the rash very rarely is bounded by Hebra's line.

The petechio-erythematous rash, in the height of development, is of a redder colour than the petechial. This redness is dark, with a tinge of purple, and sometimes it is almost blue in the groins. The erythema covers a wider area than the petechiæ, and the colour varies according as the erythema is more or less mixed with the petechiæ. The skin over the area affected by it is not always smooth. In the majority of cases, however, the skin over the site is smooth, of its natural soft feel, and entirely covered with rash. The colour, as a rule, is not uniform, as minute points are of a darker colour. The redness fades, but these points are persistent on pressure, and sometimes remain after the erythema disappears. Sometimes the redness is quite persistent on pressure, and in some cases it completely disappears until the pressure is removed. The

<sup>1</sup> *Skin Dis.*, p. 56.



site chosen by the petechio-erythematous is more complicated than that of the pure petechial rash. The parts on which the petechiæ are seen in the redness is, as a rule, similar to those parts affected by the petechial rash. Sometimes, however, there are no petechiæ in the groins, while present on the sides of the chest and on the inner surface of the upper arms and in the axillæ. This rash reaches lower down on the thighs and further up on the chest. In several of my cases it surrounded the body entirely, leaving the back above the level of the spines of the scapulæ free, and the buttocks below the level of the trochanters. In one case a strip of rash covered the skin between the buttocks, reaching from one tuber ischium to the other, and joining the rash on the back with that on the abdomen by attacking the scrotum. On the thighs this rash forms an oblique border, running from the inner surface upwards, outwards, and backwards, similar to the inferior border of the petechial rash, but, as a rule, it reaches considerably nearer the knee-joint, and sometimes is lower at the outer surface of the thighs than the trochanters, from which it stretches across the back. Sometimes, in addition to the rash on the body, the forearms and the legs below the knees are covered with a bright red erythematous rash, which entirely disappears on pressure.

The duration of the hæmorrhagic rashes vary considerably. They begin to fade one or two days after their first appearance. Sometimes this process is so gradual that when the colour gets light brown or coppery no difference can be seen for days. If the spots are thickly set, the coloration at this stage might be the natural colour of some persons, and can only be detected as abnormal by being compared with healthy skin elsewhere.

The duration from the period they were first noticed until they had entirely disappeared has, in my cases, been twenty days in one case, eleven in one case, eight in one case, seven in one case, six in four cases, five in four cases, four in two cases, and three in four cases.

*The Erythematous Rashes.*—Every author that wrote about the rashes that precede smallpox seems to have been acquainted with the erythematous. Only a few have described them except by comparing them with scarlet fever, erysipelas, or measles. Hebra<sup>1</sup> describes them as occurring in two forms, one form being like roseola and the other like erythema. Trousseau<sup>2</sup> describes a form of the erythematous as being like measles, and gives it the name of morbilliform to distinguish it from the scarlatiniform, which in all probability was what I have described as the petechial rash on an erythematous base. Marson, in Reynolds's *System of Medicine*, states that they are liable to be mistaken for scarlet fever, but that they are of a lighter roseolar tint. This rash was long confounded with the blotches that precede but develop into the ordinary

<sup>1</sup> "Skin Dis." *Syd. Soc. Trans.*, 1868, vol. i. p. 56.

<sup>2</sup> Trousseau, "Clin. Lect.," *Syd. Soc. Trans.*, vol. ii. p. 81, 1869.



papules, but it is a different phenomenon. It often disappears before the eruption of smallpox is developed. Sharkey states that this happened in his fourth case. One patient, who was a very intelligent young man, assured me that the red rash totally disappeared some time before the red spots of smallpox showed themselves on any part of his body. It also disappeared before the development of the smallpox eruption in two other cases. I have only seen five cases that showed this rash on admission into the hospital. This was probably owing to their short duration, and the advanced stage of the disease at which the patients were generally admitted. I have seen several cases in which an erythematous rash was present on one part of the body while mixed with the petechial rash about the groins. I have included these cases in the petechio-erythematous rash already described. The erythematous rash, when fully developed, is of a bright red colour, which disappears momentarily on pressure. The redness is sometimes uniform, like erysipelas. In some cases it is minutely mottled, like scarlet fever, and in other cases in patches and crescents, like measles. In all the cases I have seen the rash was smooth to the touch, and the skin affected by it was of its natural softness. The redness was, however, in some cases so bright, and contrasted so much with the healthy skin, that one might imagine the red part to be swollen; but on careful examination this was found to be an illusion. The period of the premonitory symptoms at which the rash was noticed varied in different cases. It was observed on the second day of the illness in one case, on the third day in two cases, and fourth day in two cases. It was noticed before the smallpox eruption part of one day in one case, one day in three cases, and two days in one case. Dr M'Combie gave me a short account of five cases of this rash. It was observed on the second day of illness in one case, on the third day in two, on the fourth day in one, and on the fifth day in one. The smallpox papules appeared one day after the initial rash in one case. The duration of the rash was observed in twelve cases. It disappeared in about one day in five cases, two days in two cases, three days in three cases, four days in one case, and five days in one case.

The erythematous rash remains bright red but for a very short time. It simply fades to light red and disappears, without leaving any pigmentation of the skin. The sites chosen by the erythematous rash, when any part of the body is affected specially, are the extensor surfaces of the arms and legs. In some cases the redness is quite smooth and uniform for some inches round the arms above the wrists, and the legs above the ankles, although mottled and scanty elsewhere. In other cases it covers the whole body. The rash was confined to the extremities in four cases, and it covered the whole body in nine cases.

There is no explanation for the fact that the initial rashes of smallpox are present in some cases and not in others. There is no

apparent reason why they should be erythematous in some and petechial or petechio-erythematous in others. There is, further, no satisfactory cause given for the selection by them of particular regions of the body. Simon suggested that the nervous supply might have something to do with it, but I do not think that there is sufficient evidence for such a conclusion. There are, however, certain facts that may be mentioned. In two cases there was a ring of petechial rash round one or both legs at the level of the garter. Both patients wore long stockings and garters. In Simon's case 19 there was a ring round the body at the level of the navel. Dr Gayton showed me a case of a girl who had a ring of petechial rash round the upper arms, at the insertion of the deltoid muscles. Several of my cases had a ring of rash round the neck at the position of the collar. Sharkey gives a case which had this. The petechial rash selects parts of the body which are rarely the seat of smallpox eruption. Some authors fell into the error of fancying that the initial rash always protected the part from being attacked. In the majority of cases of smallpox there is no eruption of papules in the groins, nor for an inch or two below Poupart's ligament. It is seldom that the abdomen is much affected, and often it is quite clear while the eruption is copious elsewhere. The same may be said of the sides up to the axillæ. As I have previously stated, these are the regions most frequently affected by the petechial rashes. Why it is that, instead of the smallpox papules that should appear in these places, a petechial or a petechio-erythematous rash sometimes develops, cannot properly be explained.

There is reason to believe that on a more extended area the smallpox eruption may assume the character of a petechial rash. In one case the smallpox eruption was semi-confluent almost over the whole body, but it stopped suddenly at the boundary of the petechial rash, which covered the whole of the abdomen and chest, leaving the part covered by it almost entirely free from papules. In another case there was a ring of confluent papules round one leg, and a ring of petechial rash without papules round the other at the same level. In several of my cases, however, the site of the initial rash was afterwards covered with confluent smallpox eruption. Of 58 cases only 7 were unvaccinated (12·4 per cent.); of these, six had the petechial rash, and one was doubtfully petechio-erythematous. From 13th September 1880 to the 16th of January 1881 I attended 328 cases of smallpox; of these, 226 were vaccinated, and 92 unvaccinated (28 per cent.) Among them were 23 cases who had an initial rash; of these, only two were not vaccinated (8 per cent.) The proportion of unvaccinated was therefore lower in cases which showed the initial rashes than in cases free from them. In Simon's 37 cases, 30 are stated to have been vaccinated. It is not stated whether the others were vaccinated or not, so that not more than 23 per cent. could be unvaccinated, and probably the



proportion was lower. Of Osler's 11 cases only one (9 per cent.) was not vaccinated. Of Sharkey's 12 cases 10 were vaccinated. It is not stated whether the other two were vaccinated or not, so that not more than 16 per cent. could be unvaccinated.

Of my 58 cases, 31 were females and 27 males. One was under ten years of age, 10 from 10 to 15 years of age, 19 from 15 to 20 years of age, 12 from 20 to 25 years of age, and 16 from 25 upwards. The oldest patient was 49 years old; the youngest having an initial rash that I saw myself was 10 years old. In Osler's 11 cases the ages ranged from 14 to 29; in Sharkey's 12 cases, from 15 to 44; and in Simon's 37 cases, from 13 to 53. It thus seems that a case of initial rash under 10 years is extremely rare. As I have already stated, vaccinated cases are more liable to be affected by initial rashes than unvaccinated. Comparatively few vaccinated children are affected with smallpox under 10 years of age. Of 276 vaccinated persons admitted into the Homerton Smallpox Hospital in 1880, only 44 were under 10 years of age. Of 203 cases of unvaccinated persons, 115 were under 10 years of age. This might explain the rarity of initial rash under that age.

(To be continued).

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## Part Second.

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### REVIEWS.

*On the Pathology of Bronchitis, Catarrhal Pneumonia, Tubercle, and Allied Lesions of the Human Lung.* By D. J. HAMILTON, M.B., F.R.C.S.E., F.R.S.E., Professor of Pathological Anatomy (Sir Erasmus Wilson Chair), University of Aberdeen. London: Macmillan & Co.: 1883.

THIS work, as the author mentions in the preface, took its origin in a series of papers which appeared in the *Practitioner* in 1879 and 1880. Many of our readers will recall the interest with which these articles were read as they came out. They have now been elaborated and brought up to date in relation to recent pathological doctrines, more particularly as regards phthisis, and they thus comprise a work of much importance to the physician, and one in every way well worthy of careful study.

The author divides his book into two parts. In the first he treats of the histological structure of the bronchi, and then proceeds to indicate how the various elements composing them are affected in acute bronchitis, dwelling in particular on the changes affecting the epithelium, the basement membrane, and the mucous glands. Thereafter the more profound and destructive changes of chronic bronchitis and its attendant complications—interstitial pneumonia,



emphysema, and bronchiectasy—are sketched, and an excellent account given of the histology of anthracosis.

This first portion of the book contains much original matter of great interest and value; and it would be difficult to find a more concise, lucid, and satisfactory statement of the pathological changes in bronchitis than is here presented.

The second portion of the work deals with the subjects of catarrhal pneumonia and tubercle. After describing the structure of the normal air-vesicles of the lung, the author proceeds to consider the effects of increased blood-pressure suddenly applied to its bloodvessels, and this leads him to refer in the first place to the subject of the pathology of croupous pneumonia. Professor Hamilton briefly sketches the morbid anatomy of the lung tissue which is the seat of the disease, and expresses his conviction that these various changes are "*purely mechanical*, resulting from one cause, namely, *suddenly increased blood-pressure*." The author, in working out his theory, traces the whole process—the over-stimulation by cold, etc., of the pulmonary vessels; the spasm, followed by relaxation; the blocking up of capillaries with the corpuscles of the blood; the tension thus induced in the vessels that are pervious, and the effect of this in the passage out from the blood of a fluid rich in solids (albumins, etc.), forming the characteristic exudation of croupous pneumonia. The passage out from the vessels of leucocytes and coloured corpuscles is illustrated by Mr Hamilton's ingenious experiment with fragments of gelatine placed upon a dialyser minutely perforated, and subjected to a certain pressure. He further holds that his theory derives support from the effects of bloodletting in pneumonia, which he regards as the one sovereign remedy, from its action in lowering the blood-pressure and thus cutting short the disease.

Notwithstanding the skill with which Mr Hamilton works out his theory, and the earnestness with which he insists on its rational character, we venture to doubt whether it will find much acceptance as affording a satisfactory explanation of the whole of the phenomena of pneumonia. That the mechanical effect of increased blood-pressure is a factor, and a very important one, in the etiology and pathology of croupous pneumonia, no one can deny; but the nutritive changes affecting the lung, and the remarkable clinical characteristics of the disease, are not accounted for by Mr Hamilton's theory. Further, since pneumonia is recognisable by the physician only after the changes produced by the exudation have occurred in the lung, we altogether fail to see how bloodletting could cut short the disease. On the contrary, we incline to the belief that the mortality from this complaint—which, thanks to the modern methods of treatment, tends in the majority of instances to cut itself short in little more than a week—would speedily return to the dimensions it had attained before the days of Bennett, were this "sovereign remedy" resorted to in any but very exceptional cases.

Professor Hamilton refers, by way of contrast, to the effect of increased blood-pressure slowly applied, as in the case of mitral disease, where congestion, œdema, and brown induration of the lung are the results, and not pneumonia. Here, clearly enough, we have to do with a mechanical condition, and one, moreover, in which a resort to bloodletting may sometimes achieve much in the way of relief.

The subject of catarrhal pneumonia is next dealt with, and its morbid anatomy, the changes which take place in the inflammatory products, more especially caseation and the relations of this to tubercle and phthisis, form topics for elaborate treatment. Mr Hamilton follows to some extent the views of Virchow and Niemeyer as to the connexion between catarrhal pneumonia and tubercle, and holds strongly the theory of an infection or infectious ferment derived from some caseous degenerating focus in some distant organ (producing "primary tubercle"), or in the lung itself (producing "secondary tubercle"). As regards the histology of tubercle, Mr Hamilton considers it as merely a form of connective-tissue growth produced by the irritant conveyed from the caseous mass, and draws an analogy between it and a sarcoma. To the subject of the contagiousness of tubercle and phthisis the Professor devotes the last chapter of his book. He is not in love with Koch's doctrines, and refers in somewhat sarcastic terms to the manner in which these have been received by the medical profession and the public. He admits the importance of Koch's discovery, but regards the conclusions drawn from it as exaggerated and illogical. While denying that tubercle is the result of the direct reception into the system of the bacillus, he yet skilfully incorporates Koch's theory with his own, to the extent of regarding this bacillus (developed, he holds, as to its special characteristics, in a caseous mass) as associated with the "ferment" by which the tissues are irritated and tubercle developed in a given locality. This view, though ingenious, cannot be said to be very convincing or satisfactory. No doubt the new doctrine appears to attach too little importance to the inflammatory processes which constitute so frequent an accompaniment of the changes designated tuberculous, and which are dwelt on with so much emphasis by Professor Hamilton; but, on the other hand, it may be doubted whether the latter has given that amount of attention and inquiry to the bacillus theory which it deserves, and which he is so eminently capable of doing.

On the whole, while there are some statements and hypotheses in this book to which we would hesitate to subscribe, and which, indeed, appear to be negatived by facts both clinical and pathological, we yet feel that these detract in only a very small degree from the merits of a work of much ability and originality. It forms an important contribution to special pathology, and is well worthy of perusal by the physician. It is manifestly the outcome of honest work; and if there does seem a tendency to dogmatic expression of opinion, and too little looking at the other side, there is



equally evidence of the earnest investigator into scientific truth, who thinks for himself, and who can say, "I believed, therefore have I spoken."

The book is admirably illustrated, and the style is clear and attractive.

*On Curvatures and Disease of the Spine.* By BERNARD E. BRODHURST, F.R.C.S., etc. Third Edition. London: J. & A. Churchill: 1883.

*Lectures on Orthopædic Surgery and Diseases of the Joints, delivered at Bellevue Hospital Medical College during the Winter Session of 1874-1875.* By LEWIS A. SAYRE, M.D., etc. Second Edition, revised and greatly enlarged. London: J. & A. Churchill: 1883.

*Chirurgie Orthopédique Thérapeutique des Difformités Congénitales ou Acquis: Leçons Cliniques professées à l'Hôpital des Enfants-Malades.* Par le Dr L.-A. DE SAINT-GERMAIN, Chirurgien de l'hôpital des Enfants-Malades. Recueillies et publiées par le Dr PIERRE J. MERCIER, Médecin-consultant à Bourbonne-les-Bains. Paris: J. B. Baillière et Fils: 1883.

THE first two of these works have for some years past been well known to British surgeons. Mr Brodhurst's book, originally written as lectures to the pupils of St George's Hospital, has reached its third edition, and embodies the experience of a lifetime devoted to the practice of orthopædic surgery. Though it has, with one or two exceptions, where slight tautologies remind us of it, lost the lecture form, it is nevertheless a book that is pleasant to read. Its chief drawback as a work of ready reference is the want of an index, which we hope may be remedied when another issue is called for. The parts which will perhaps be read with most interest in the present edition are those in which the author deals with the application of the plaster-of-Paris jacket in spinal deformity and disease. Those who have been watching the recent tendencies of what we may be allowed to call orthopædic thought will not be surprised to find that his views regarding the jacket are unfavourable to its use. Both in Pott's disease and in lateral curvature it is declared to be worse than useless. Its evil effects are illustrated by reference to several cases, two of which had been under Dr Sayre's own care. With one objection to its use most surgeons who have had experience of it among poor children will readily sympathize. It is a very dirty appliance, and extremely liable to collect vermin.

The second edition of Sayre's book is one of the most important orthopædic publications of the present year. Much new matter and several illustrations have been added to it. The lectures on



spondylitis and lateral curvature have been rewritten. In some few things it is still disappointing. Here and there inaccuracies occur and omissions are apparent. The use of electricity is strongly recommended as part of the treatment of paralytic deformities, but no rules are given for the choice of current. The lecture on malformations is very meagre, more space being devoted to the record of successful cases than to the ætiology or pathology of this most interesting subject. The desire to record cases, more particularly when they are embellished with the correspondence of fond parents, is very conspicuous, and cannot but be regarded as somewhat of a blemish. One letter in particular, inserted into the lecture on phymosis, would almost pass muster with some recent gynæcological productions. The lectures on diseases of the joints are perhaps the most valuable part of the book, but we cannot help thinking it matter for regret that so much prominence should be given to the operation for excision of the hip. The cases in which this operation is required ought to be very few, and the tendency of most surgeons, including Sayre himself, seems to be to perform it less frequently the older they grow in years and wisdom.

Notwithstanding the increasing objections to its use, the plaster-of-Paris jacket is still declared to be the best form of treatment in spinal caries and curvature. It cannot be said that these objections are well answered in the short paragraph devoted to them in the lecture on the treatment of spondylitis, while the modifications made in the application of the jacket for lateral curvature are, to our thinking, a confession that the former method of applying it has turned out a failure. It is now directed that it be so made that it can be removed at night, and that it should not be worn when the gymnastic exercises and self-suspension are being practised. In cervical disease we regret to observe that the unsightly jury-mast is still recommended.

Paralytic deformities are dealt with in a single chapter, in which special attention is drawn to wrist-drop as a result of lead-poisoning. The cases illustrative of this deformity are of great clinical importance; but one is very much tempted to ask why a virgin should have contracted vaginismus from a cosmetic.

Saint-Germain's book is in more senses than one comprehensive. Commencing with a chapter on some of the more famed Parisian orthopædists, it goes on to treat of not only subjects usually found in orthopædic text-books, but also such remote matters as obesity and the application of artificial limbs. It cannot be said that any of these affections receive inadequate treatment at the hands of Saint-Germain. Their ætiology and pathology are very fully gone into, and details as well as the principles of treatment plainly and thoroughly discussed. In several points the teaching differs from that of British schools. The author is not in love with Morton's iodo-glycerine injection for spina bifida. In opposition to Brod-

hurst, Sayre, and others, he denies traumatism as a likely origin of Pott's disease. He also considers the general treatment of that malady more important than the local. He does not like the prone couch, but prefers the apparatus of Bonnet. He objects to vertical suspension in scoliosis, and recommends gymnastic exercises in the horizontal position, *e.g.*, the movements used in swimming.

A complete lecture is devoted to a consideration of the use of Sayre's jacket in caries and curvature. He frankly confesses that he was not favourably impressed by Sayre's exhibition at Cork; but his experience has since modified his views, and he believes the jacket to be of service in the reparative stage of Pott's disease. It is useless, he thinks, in lateral curvature. The pros and cons for its use in caries are fairly and temperately discussed, and he meets some of the objections better than Sayre himself. Altogether, the work is one of extreme value, both generally and as an introduction to French orthopædic surgery.

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*Abdominal Hernia and its Consequences, with the Principles of its Practical Treatment.* By RUSHTON PARKER, B.S., F.R.C.S., Professor of Surgery in University College, Liverpool. Adam Holden, Liverpool: 1883.

MR PARKER'S object in writing this book has not been to produce a complete treatise on hernia, but to accentuate certain points "in a manner that is intended to be suggestive, if even assertive, rather than exhaustive." The points he has selected for accentuation are—(1) the functional intestinal obstruction which may exist after the relief of strangulated bowel; (2) the pathology of so-called strangulated omental hernia; (3) the difference between intra-peritoneal and extra-peritoneal perforation of intestine; and (4) the radical cure of hernia. With what he says on the first three of these most surgeons will probably feel themselves inclined to agree; but it is doubtful if his teaching on the fourth will receive unanimous approval. In direct (though unavowed) opposition to the doctrines laid down by Lawrence and John Wood, he holds that in the majority of cases no attention need be paid to the condition of the rings or canal in inguinal hernia, provided that the sac be firmly occluded by ligature of the peritoneal lining of its neck close up to where it comes off from the main peritoneal cavity. It is true that when this is done there is little likelihood of the hernia coming down, there being no sac to receive it; but what is to prevent the formation in the course of time of a new sac, and the recurrence of the hernia, if the canal and rings remain as weak and perhaps as patent as before? It is not improbable that in those cases where a radical cure has been obtained, this good result has been brought about by the peritoneum having become less extensible (after the



removal of a not inconsiderable portion of it as hernial sac), and also by the canal being put in such a condition as more successfully to resist the formation of a new sac. How this last may be best attained is still a moot point; but the weight of experience seems to be in favour of approximating the sides of the canal and the pillars of the ring, so as to form a stronger resisting barrier to the recurrence of hernial protrusion.

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*On Cancer, its Allies, and other Tumours, with Special Reference to their Medical and Surgical Treatment.* By F. A. PURCELL, M.D., M.R.C.S., Surgeon to the Cancer Hospital, Brompton. London: J. & A. Churchill.

It is somewhat disappointing that Dr Purcell has relied more on the writings of other pathologists than on his own extensive experience. One who has had such exceptional opportunities could surely give to the profession a valuable work embodying the results of his practice at Brompton; but Dr Purcell has evidently thought that his experience would better enable him to extract the good ideas from the writings of others, and thus to compile a reliable work of reference. And he has succeeded in doing so; but the value of the book would be greatly enhanced were the sources stated from which he quotes. Little fault is to be found with the way in which the matter is treated; but exception may be taken to separate chapters being devoted to the various degenerations of carcinoma, which might be better dealt with when generally considering the subject of cancer. The drawings of sections of tumours under the microscope are well done, and show clearly the distinguishing points of the different forms of cancer and sarcoma.

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*The Journal of Anatomy and Physiology, Normal and Pathological.*  
Vol. XVII., Part IV., July 1883.

THIS number contains several papers of special importance in connexion with practical medicine. The first article is on "The Action of Saline Cathartics," by Dr Matthew Hay. In previous numbers of the Journal (Parts I. and III. of this volume) he has given details of numerous experiments to determine the nature of the action of a saline cathartic, and in the present number these are criticised with great ability and judgment, and a number of important deductions drawn.

With regard to their action on the alimentary canal, Dr Hay considers that he has proved that they provoke an increase of secretion from the small intestine, which is probably a true "succus



entericus." They do not appear to cause any increase in the biliary or pancreatic secretion. They remove a large amount of fluid from the blood into the intestines. If the salt solution be a very dilute one, the water in the solution is absorbed and replaces the water lost by evaporation. If, however, the solution be a concentrated one, the bulk of the blood becomes greatly diminished, but in one or two hours the blood has recouped itself from the tissues. Hence the value of a concentrated saline cathartic in cases of dropsy where it is desired to effect a rapid and extensive reduction in the dropsical fluid. These salts, whether given in a dilute or concentrated solution, appear to increase in a few hours the secretion from the kidney. With regard to the much-disputed subject of how they cause an increase in the intestinal secretion, Dr Hay believes that the secretion is due to a reflex stimulation of the Lieberkuhn glands by the salt applied to the surface of the mucous membrane. They do not purge when injected into the blood nor when injected subcutaneously. The salt employed by Dr Hay in his experiments was the sulphate of soda, sometimes the sulphate of magnesia. In summing up, Dr Hay says:—"Their purgative action is, therefore, extremely simple. They sweep out the contents of the alimentary canal, with the least possible disturbance of the digestive system and of the other systems of the organism. Few other purgatives, if any, have so simple an action. The value, therefore, that has long been assigned to them in the treatment of the occasional disturbances of digestion to which almost every one is at times subject, and where the indication seems to be to empty the canal "*cito, tuto, et jucunde*," is quite justified by the results of this investigation."

In a paper "*On the Membrana Tympani*," Mr J. M. Crombie makes a vigorous onslaught upon the views of Helmholtz; and although he does not attempt much in the way of constructing theories of his own, yet some of his criticisms are worthy of careful consideration by physiologists and aurists. He holds that Helmholtz has failed by endeavouring to explain the mechanism of the *membrana tympani* and auditory ossicles on the principles of acoustics, without due consideration of the anatomical peculiarities of those structures. He also considers that his work is marred by starting with the accepted notions of the *membrana tympani* as a permanently stretched membrane. He asks, "What proof is there that the drum is maintained normally in a state of tension?" and considers that the view of the action of the tensor tympani as further stretching this hypothetically stretched membrane is erroneous. Incorrect physiology leads to mischievous modes of treatment. "It consequently follows that the tensor tympani, situated though it is in the most inaccessible of regions, is nevertheless assailed by the irresistible tenotomist, who believes that his patient is suffering from over-stretching of the membrane and its consequences, owing to spasmodic action of its muscle."

Mr F. le Gros Clark, F.R.C.S., contributes a paper entitled

"Some Remarks on the Anatomy and Physiology of the Urinary Bladder and of the Sphincters of the Rectum." Apart from the intrinsic merits of this communication, it is of interest from the fact that he published an article on the same subject nearly half a century ago (*London Medical Gazette*, June 1836), about which time he was assisting Marshall Hall in some of his experiments. With regard to the difficult question of the innervation of micturition, Mr Clark holds that in early life it is chiefly reflex, but is gradually rendered voluntary by education and habit. He considers that the abdominal muscles take no necessary part in the expulsion of urine. With regard to the retaining capacity of the bladder, he draws attention to a point which is often overlooked, viz., the hydrostatic conditions connected with the expulsion of urine from a reservoir the size of the bladder, through such a small tube as the urethra. Dr Stone, whom he consulted on this point, informed him that he estimated the tension of the internal area of the bladder to be about 560 times that of the vesical outlet. This certainly affords a simple explanation of how a slight obstruction in the urethra can resist very powerful expulsive efforts of a distended bladder. He believes that the retentive power is mainly of a passive nature, and practically independent of muscular action. The applications of his physiological views to the explanation of pathological phenomena connected with micturition are well worthy of the attention of the practical surgeon.

The Journal contains a number of other articles on anatomical and pathological subjects, and altogether this number is fully up to the usual high standard.

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*The Present Aspect of the Antiseptic Question.* By E. LUND, F.R.C.S.  
Manchester: J. E. Cornish: 1883.

THE pamphlet before us is a reproduction of the Oration for 1883 delivered by Mr Lund before the Medical Society of London. The author declares that he approaches the subject with the "truthful light" of "exact and unbiassed inquiry." He then proceeds to confess that such things as carbolic acid, germs, etc., are "painfully provocative" to him, although he tells us at the end of the oration that he has in his own person experienced from the hands of Mr Lister the "comfort, absence of pain, freedom from constitutional and intellectual disturbance," afforded by antiseptic surgery. He says, "I can but define it as being the *beau idéal* of what, to my mind, such treatment ought to be." And "It is *par excellence* the mode of treatment to be desired when the circumstances are such that it can be carried out in its entirety."

Notwithstanding his personal experience of the system, it is evident from Mr Lund's "oration" that he is not in favour of its general application. The only reason for this opinion that we can



discover is, that under Mr Lund's observation "the intentions of those who practise Listerism are excellent—but, alas! failures are frequent." We fail to see, however, that this is an objection to the practice of antiseptic surgery. Our experience has not been that of Mr Lund's. Frequent failures are not the result here; and were Mr Lund to come north, he would find much to encourage him, or perhaps, we fear, "painfully provoke" him, in the results of Edinburgh surgery.

Although Mr Lund does not, in our opinion, take an "exact" or "unbiassed" view of the antiseptic system, yet we have read his "oration" with pleasure, and we hope it will do good in drawing attention to the fact that many, in practising what they suppose to be Listerian surgery, neglect some detail which to them seems of little importance, but which is sufficient to open a doorway by which "the enemy may enter and spread confusion in the camp." And "hence it is that those who object to the antiseptic system declare that they have tried it honestly, and have obtained as good results without its use." We would add to this, that the most, if not all, of those methods of treatment which are nowadays in some quarters vaunted against Listerism owe their origin to, or are really modifications of, the antiseptic system.

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*The Extra Pharmacopœia of Unofficial Drugs and Chemical and Pharmaceutical Preparations.* By WILLIAM MARTINDALE, F.C.S., late Demonstrator of Materia Medica at University College. With References to their Use, abstracted from the Medical Journals by W. WYNN WESTCOTT, M.B., Deputy Coroner for Central Middlesex. London: H. K. Lewis: 1883.

THIS is a book which is sure of a wide circulation. The authors have brought together into small compass the many new drugs which are so extensively used in the present day, not only in this country, but wherever medicine is practised. Since the publication of the last edition of the *British Pharmacopœia* many new drugs have been brought under the notice of the profession, several of which are destined to find a permanent place in all pharmacopœias. This extra pharmacopœia contains most of the unofficial drugs which are used in the present day. They are arranged alphabetically. We have an excellent description of the several drugs, their sources in nature, their doses, and the diseases for which they are used. Reference is also made to the literature of the subjects, which is not the least useful part of the book.

The book is by no means without faults. For example, after stating that the purgative properties of aloes are due to crystalline principles (*aloin*), he adds, "and to uncrystallizable matter, soluble in water, nearly allied to them." Would the authors state what



these "uncrystallizable matters" are, or give a well-authenticated example of any purgative substance being found in aloes unless it contained *aloin*.

The book is elegantly got up, and will be read with great interest in the present day, not only on account of the valuable information regarding new and comparatively unknown substances, but very specially in view of the publication of a new edition of the *British Pharmacopœia*.

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*The Book of Prescriptions: containing upwards of 3000 Prescriptions, English and Foreign, comprising, also, a Compendious History of the Materia Medica, Lists of the Doses of all Official or Established Preparations, and an Index of Diseases and Remedies.* By HENRY BEASLEY. Sixth Edition. London: J. & A. Churchill: 1883.

THIS book is now enlarged to nearly 600 pages, and contains a great deal of valuable information, and is a volume which no one can peruse without deriving much benefit. We must assert, however, that students will never become good writers of prescriptions by merely studying prescriptions, many of which, though written by men greatly distinguished in their profession, are by no means good models for students to copy. The author tells us that his 3000 prescriptions are "collected from the practice of the most eminent physicians and surgeons, English and foreign," but it would not be difficult to find fault with very many of these, inasmuch as they contain substances which are neither official nor important in the treatment of diseases. Mr Beasley quotes four prescriptions to teach the student how to order cherry-laurel water, a preparation useful only for the hydrocyanic acid contained in it, which is never much, and, what is worse, always very uncertain in quantity. It is good to teach students the vehicles in which medicines are to be administered, but care must be taken that the best vehicles are always selected. Under croton oil he neglects to mention the best of all vehicles for the administration of this powerful but most useful medicine, namely, *olive oil*. This is at once the best vehicle in which to administer croton oil, and is the combination most easily dispensed by the chemist. He gives eight forms of pill, and six liquid combinations for its internal use, but in no case does he mention olive oil as a menstruum. In the next edition we hope to see the specific names of plants without a capital letter, as is now adopted by all botanists.

*The Bristol Medico-Chirurgical Journal.* Edited by J. GREIG SMITH, M.A., F.R.S.E. Vol. I. No. 1. Bristol: J. W. Arrow-smith: July 1883.

THIS is the first number of a new half-yearly journal to be published under the auspices of the Bristol Medico-Chirurgical Society. We are glad to welcome it as an exponent of West of England practice, and wish it every success and a long life. The present number is so full of interesting matter, that we look forward with pleasure to the appearance of the second in January.

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### *The Medico-Legal Journal.*

WE have to chronicle the advent of the *Medico-Legal Journal*, a quarterly devoted to the science of medical jurisprudence, and published under the auspices of the Medico-Legal Society of the city of New York. In the preface we are told that there is no journal at present in any part of the world devoted exclusively to this subject; and although this be true, there are at least two continental journals, the *Annales de Hygiène*, and the *Vierteljahr Schrift für Gerichtliche Medicin*, which include this department of state medicine with that of public health.

The journal is to publish the leading papers of the Medico-Legal Society, and to give a *resumé* of its transactions, though the columns will also be open to contributions on appropriate subjects from all sources.

This first number, which was published in June, gives us the inaugural address of the president of the Medico-Legal Society, reports of various committees and commissions, and a copious editorial department. The question of a reform of the lunacy laws is exciting profound interest on the other side of the Atlantic, and no small amount of the space in this first issue of the journal is devoted to that subject—the recommendations of the committees being mainly in the direction of an assimilation of the system to that of England.

The only contribution to toxicology is a somewhat crude paper on the properties of nitrate of silver as a therapeutic agent and as a poison, and a case of poisoning by this substance in a horse is therewith recorded.

The first issue bears on it the imprint of hasty preparation and lack of revision, typographical errors being by no means few. We notice also the frequent use of transatlantic methods of expression, such as "donated" for "given." The journal, however, is launched under favourable auspices—abundance of support being promised it by the physicians and lawyers of New York. The subsequent issues will, therefore, in all likelihood surpass the initial one in excellence.

## Part Third.

### PERISCOPE.

#### MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

**USTILAGO MAIDIS (CORN ERGOT).—***Ustilago maidis* possesses properties analogous to rye ergot. The contraction of the uterus following the use of ergotin is continual or constant, while after the latter is more intermittent, and for this reason it is so highly prized by many obstetricians. The corn ergot causes less pain to the parturient, and is very much safer to both mother and child on account of its physiological action. Many observers prefer it to *Secale cornutum* in passive hæmorrhages. Although this remedy is but little known in this country at present, it seems as though it will before long supplant the use of *Secale cornutum*, since it is more efficient and reliable. The dose of the 50 per cent. fl. ext. is 20 drops (*Journal de Méd. de Paris*).—*The Therapeutic Gazette*, September 1883.

**NEW USE OF CHLORAL.—**B. Bonatti recommends the following mixture as an easily administered, prompt, and certain drastic purgative:—

℞ Infusi sennæ, f. ℥x.  
Chloral, 24 to 45 grs.  
Syrupi, ℥j.

The infusion of senna is to be prepared from 90 grains (increasing, if necessary, to 180 grains) of senna leaves. The author states that he obtained results with this mixture after jalap and croton oil had failed to act (*D. Med. Zeit.*)—*New Remedies*, 1883.

**LIQUID CARBONIC ACID.—**Mr Adolph Vomacka thinks that a new era is dawning for the manufacturers of mineral and soda water, since they will no longer be compelled to purchase and keep an expensive apparatus for generating the gas or compressing it. Experiments have shown that equally good products may be obtained by dissolving liquid carbonic acid in water. The advantages in this case are, that liquid carbonic acid may be obtained commercially pure and free from common air, and the liquid itself, on expansion, exerts all the pressure required (*Rundschau, Leitmeritz*).—*New Remedies*, 1883.

**ATROPINE IN EPILEPSY.—**Although the value of atropine in epilepsy was known to the profession for some time past, already it seems almost necessary to call attention to it again, especially since so many conflicting statements are made with regard to the efficiency



of the belladonna preparations in this form of trouble. One observer obtains good results, and others get no results at all, because they are timid about giving the remedy until they get the constitutional effects. E. C. Squire makes the remark, in an article on the proper dosage of medicaments in the treatment of nervous disease, that nearly always these remedies are administered in doses that are entirely too small. He makes allowance for age, sex, and general condition of the patient. The first dose, before the patient is known, is generally small, but then the remedy is increased until toxic symptoms are present, and this condition is maintained for some time. The physician will sometimes be surprised to observe the tolerance in children of some drugs. The following is a short history of two cases of epilepsy treated with atropine:—Edward S., æt. 16, 5th Feb. 1883, was admitted to the hospital; complained of attacks of epilepsy for two months past, occurring at intervals of three to six days, caused, as patient stated, by a stroke on the head received from his step-father. Patient had never been sick prior to that time. Patient's general appearance good; slight depression notable near the large fontanelle. From Feb. 3 to 12, no attacks; in the afternoon a typical attack lasting three minutes; repeated 15th Feb.; two attacks on the 19th, lasting three to five minutes, and a repetition on the 24th. From the 6th Feb. to 8th March the patient received 3 grm. brom. kali daily. 9th March.—Atropine treatment commenced, 0.025 to 10 grm. water, dose 10 drops twice a day. For the first three days no toxic symptoms appeared. Dose was increased 10 drops a day, making 3.75 mg. pro. die, causing only slight accommodation disturbances and dryness of the fauces. This treatment was continued till 9th April. Sometimes patient received 40 drops of the above solution without injury. 12th April.—Patient left the hospital as cured, reporting once a week at the hospital. 17th May.—At the time of writing patient had no more attacks of epilepsy, and was feeling well in every respect. The second case is so similar, that to give it here would almost look like a repetition of the first case. Nearly every drug in the *Materia Medica* has been administered for the relief of epilepsy, but in nearly every instance the remedy did not prove efficient. In glancing over the literature on this subject, the following conclusions are arrived at:—1. The bromides disturb digestion. 2. Atropine, in small doses, even, has the property of diminishing the severity of an attack. 3. In all epileptiform seizures atropia is of some benefit. 4. When the result shall be permanent, it must be administered until symptoms of intoxication are produced. 5. Tolerance increases after the use of the drug for some time; in one case the dose was increased to 4 milligrams pro die (*Centblatt. d. Gesamt. Therapie*).—*The Therapeutic Gazette*, September 1883.

SUBMUCOUS INJECTIONS OF CHLOROFORM.—In the last number of

the *Progrès Médical*, Dr Guillot publishes his experience with chloroform in odontalgia when injected under the mucous membranes of the gums. This practice he has carried out for six years. Chloroform, applied in this manner, is preferred to morphine, since it acts much more rapidly. This procedure was first suggested by Dr Dop, who practised it in fifteen cases without any remarkable results. Guillot attributes his good results to the manner in which he makes the injections. A Pravaz syringe is filled about half full of chloroform, and the needle pushed deeply into the submucous tissues; and great care is taken that the liquid does not flow out again when the needle is withdrawn. Author claims never to have noticed any bad results following this use of chloroform.—*The Therapeutic Gazette*, September 1883.

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### PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

**SURGICAL OPENING OF THE MASTOID PROCESS.**—Schwartz (Archiv für Ohrenheilkunde, xix.) has now completed the account of his second series of cases of surgical opening of the mastoid. All of the histories are given very fully, even with the temperature charts where such were of importance; and we can only repeat with greater emphasis what was said in these reports at the completion of the first series of fifty cases, that never has a surgical procedure so early in its history been submitted to such a thorough and scientific analysis and study. The ages of the patients were as follows:—Between two months and one year, 6 cases; between one year and ten years, 23; between eleven and twenty years, 32; between twenty-one and thirty years, 20; between thirty-one and forty years, 4; between forty-one and fifty years, 7; over fifty years, 8: total, 100 cases. Cured, 74; not cured, 6; died, 20. The per cent. of cured is somewhat greater in the second than in the first series; the per cent. of deaths is just the same. The duration of after-treatment varied between one month and two years; the average duration of treatment was about eight months in the second series, and between nine and ten months in the first series. The average duration in the acute cases alone was nearly three months. The cause of the failure to cure in three out of the six cases is positively asserted to have been merely an insufficient after-treatment. Of the twenty deaths, six were from meningitis purulenta, three from meningitis tuberculosa, two from abscess of the brain, one from phlebitis of the sinuses, one from pneumonia catarrhalis, three from tuberculosis pulmonum, two from pyæmia, one from anæmia, and one from epithelioma. In none of the cases in the second series could the operation be re-



garded as the direct cause of death. In one of the first series it was so undoubtedly, the dura mater being perforated by a splinter of bone, and death caused by traumatic meningitis. In the majority of the cases the histories show that the fatal disease had already set in before the operation, surgical interference being regarded as *indicatio vitalis* to give the patient the benefit of the evacuation of pus. From the whole series of cases Schwartz considers himself justified in asserting that the mortality from the operation itself is very slight. The high per cent. of mortality is rather apparent than real, as many cases are included in which the death was certainly independent of the operation. Allowing all the cases where there was the possibility of a connexion between the operation and the death, and adding the single case of traumatic meningitis, it is found that the mortality is reduced to six per cent. This mortality of six per cent. Schwartz considers, of course, as merely relative, since many times one hundred cases are necessary to get the absolute co-efficient of mortality. It should, however, be remembered that these one hundred cases include every case presented, without selection or reservation, a number of the earlier ones being operated upon imperfectly before the details of procedure had been fully elaborated, and a number also were already suffering from advanced consecutive cerebral disease at the time of operation, which, in view of his past experience, Schwartz would now consider as beyond surgical interference. Dividing the cases according to the conditions found, we have:—1. Acute inflammation of the mastoid without external abscess, seventeen cases. 2. Acute inflammation with subperiosteal abscess or distinct fistulæ in the mastoid, sixty-two cases. 3. The external mastoid healthy, the operation performed on account of retention of pus in the middle ear, thirteen cases, the operation being regarded as an *indicatio vitalis*, seven cases. The effect upon the hearing varies very much, and depends entirely upon the amount of destruction which has taken place from the original disease, and this is often very great. In seventeen of the cases, however, the hearing became absolutely normal. In thirty-three of the cases the cessation of the suppuration was followed by complete cicatrization of the defective drum-membranes (*Boston Medical and Surgical Journal*, vol. cviii. No. 25).—"Recent Progress in Otology," by J. Orme Green, M.D.

**DANGEROUS HÆMORRHAGES FROM THE EAR.**—The close relations of the tympanum with several of the larger bloodvessels are well recognised as sources of danger in cases of carious perforation of the osseous walls of the cavity, but, fortunately, instances of serious hæmorrhages from these vessels are rare. Hessler has collected some twenty-two cases of injuries of the carotid artery by disease in its passage through the carotid canal of the temporal bone; in nineteen of these there was serious, and in most fatal, hæmorrhage from arrosion of the artery. Böke, *Archiv für Ohrenheilkunde*,



xx. p. 47, now adds two cases from his own practice in which there were fatal hæmorrhages—in one from the *bulbus venæ jugularis*, in the other from the *sinus petrosus inferior*.

The first case was that of a man, twenty-two years old, with chronic otorrhœa on the left side, of many years' duration, who entered the hospital on account of facial paralysis on the left. Treatment of the ear was begun, and the discharge was diminishing, when, at the end of the first week, without known cause, there was a profuse hæmorrhage from the left ear, which, however, was checked by injections of cold water. During the next two weeks it recurred, and was again checked by cold water injections, when at the end of the second week there was a sudden bleeding, from which the man died. The autopsy showed the upper, anterior, and lower walls of the tympanum carious, the osseous wall of the Fallopian canal carious, and the walls of the bulb of the jugular vein destroyed and perforated. The fatal hæmorrhage came from the jugular, and apparently also from the *arteria stylo-mastoidea*. The second case was in a sailor, forty-three years of age, who applied for treatment on account of bleeding from the ear. There had been otorrhœa of several years' duration, which, however, had not kept him from his work. The blood came from the tympanum, and was checked by the instillation of *liquor ferri sesquichloridi*. Three days after entering the hospital an enormous hæmorrhage took place from the ear, from which he died in a short time. The autopsy showed the tympanic walls carious, the *sinus petrosus inferior* destroyed by caries, and communicating with the tympanum; from this vessel the fatal hæmorrhage took place. Böke then calls attention to the fact that all the cases of serious hæmorrhages are preceded by long-continued otorrhœas, which have produced caries of the bone; and examination is often insufficient to determine the extent of this caries, and, consequently, from what vessels the bleeding proceeds cannot be decided with accuracy. On this account a profuse hæmorrhage from the ear is a very serious symptom. It is assumed that arterial bleeding can be recognised by the pulsating character of the stream and by the bright colour of the blood, while venous bleeding has the opposite characteristics; but if the hæmorrhage is of mixed character, as sometimes occurs, the diagnosis of the origin of the blood is impossible. Three methods of treatment have been suggested for the bleeding—(1.) The usual local medicaments for checking hæmorrhage—cold water, iron, alum, etc.; (2.) Digital compression of the carotid; and (3.) Ligature of the carotid. The two former should, of course, be tried, but Böke does not think there are certain indications for the last, and, in fact, says that for ligation of the carotid there is no scientific reason. In support of this he says, very justly, that the diagnosis of the source of the hæmorrhage is doubtful, and then adds that in the three known cases in which ligation of the carotid was tried, all three died from a recurrence of the bleeding. In this, however, Böke is wrong, as

will be seen by referring to Hessler's paper, as reported by Dr Orme Green in the *Boston Medical and Surgical Journal*, 22nd December 1881, for one of the three cases recovered from the ear trouble, but died two months after of tuberculosis of the lungs.—“Recent Progress in Otology,” by J. Orme Green, M.D., in *Boston Medical and Surgical Journal* for 21st June 1883.

### OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

**ECZEMA OF THE PALMS.**—Van Harlingen recommends as occasionally useful, where the palmar surface is thickly covered with dry, horny epidermis, the application of the following ointment. It is spread on narrow strips of muslin, and these maintained constantly in apposition to the surface, day and night, for a considerable period. As it is very tenacious, it rarely requires to be changed:—

|   |                  |             |    |
|---|------------------|-------------|----|
| R | Hydrargyri vivi, | . grs. c.   |    |
|   | Terebinthinæ,    | . grs. c.   |    |
|   | Emplast. plumbi, | . grs. ccl. |    |
|   | Resinæ pini,     | . grs. l.   | M. |

—*Philadelphia Medical Times*, 14th July 1883.

**LICHEN HYPERTROPHICUS, A VARIETY OF LICHEN PLANUS.**—Lemoine concludes, from the variations in the descriptions recorded of cases of lichen planus, that there are several varieties of the disease, if not in its nature, at least in its appearance. A rare form is that named by Aubert, lichen hypertrophicus. In the case on which he founds his remarks, alopecia areata co-existed with the lichen, and as the one disease improved the other became worse, and *vice versa*. Besides the ordinary papules of lichen planus, there were rough, elevated patches, grayish in colour, and presenting a moss-grown or lichenous aspect. The skin round these patches, which were chiefly situated on the lower limbs, was thickened and more deeply lined than usual. The hair on the patches was absent or very scanty. From a careful microscopical examination, he concludes that the disease commences in the vascular walls, and not in the hair-sheaths. There is at first a perivascular inflammation in the deeper part of the derma, the papillary layer is affected secondarily, and the nutrition of the epidermis last of all. The disease was cured by energetic scraping, followed by frictions with soft soap, and combined with the internal administration of arsenic. Arsenic alone seemed, in this instance, inoperative.—*Annales de Dermatologie et de Syphiligraphie*, June 1883.

**TREATMENT BY SULPHUR IN ICHTHYOSIS AND ACNEIFORM CONDITIONS.**—Unna discusses the question, Is ichthyosis necessarily



a congenital and hereditary disease? and if so, is it consequently incurable? Other congenital diseases, such as nævi, are curable, and, according to Cohnheim, many tumours are already existent in the embryo. What the surgeon can do with his knife, may we not be able to effect by mechanical and chemical agencies? No one has yet proved that ichthyosis is congenital and hereditary. That it is met with in various members of the same family no more proves this than does the occurrence of psoriasis in certain families. The theory of the hereditary origin of leprosy has received a rude shock from the discovery of the bacillus lepræ. Leprosy is now admitted to be certainly contagious, and therefore we must now set aside the possibility of contagion ere we admit heredity. Ichthyosis seldom appears earlier than the end of the second year of life, and the mode and locality of its appearance permit the conclusion that it requires for its development a definite condition of the skin (which may be hereditary), the real cause being situated elsewhere. The treatment of ichthyosis consists in the nightly inunction of a 5 per cent. or 10 per cent. sulphur ointment, or the employment of a salve containing ichthyol. Though recurrences took place, the intervals of immunity were longer than after the ordinary modes. In mild cases the skin may be declared nearly clean in a few days, in more severe in two to three weeks. The treatment must not be discontinued, however, but the inunctions are to be made at longer intervals. Acne does not seem allied to the parakeratoses, such as seborrhœa, ichthyosis, etc., yet it forms the diametrical opposite to epidermoidal eczema, as Unna calls the chief forms of acute and chronic eczema. In eczema there is marked debility and defective cornification of the prickle-cell layer of the epidermis. Acne patients scarcely ever suffer from tender skins. Thus the firmer the horny layer, the more perfect the cornification, the more energetic and persevering must the use of the sulphur be. In rosacea, again, he distinguishes two forms, an arterial and a venous. Only the latter is wont to be associated with acne. Puncturing effects a cure in the former; in the latter, and especially when combined with acne, sulphur preparations are indicated.—*Monatshefte für praktische Dermatologie*, Nos. 7 and 8, 1883.

THE TREATMENT OF ECZEMA.—Dr McCall Anderson continues his papers on this subject; and, passing to the discussion of local measures, he makes the wise general remark that a very common mistake consists in the too frequent change of remedies. A very good rule to lay down is to persevere in the use of one kind of treatment as long as the case continues to improve. Local applications are by no means uniform in their action, owing to the difference of sensibility of different skins, and for other reasons; hence they sometimes aggravate the skin affection even when used in what appear to be appropriate cases. Almost without exception the first point in the local treatment is to remove all the crusts, and



the physician should refuse to prescribe any local applications, unless those calculated to attain this end, till the diseased surface is fully exposed to view. In the scaly and acute inflammatory stage, one of the safest modes of treatment is to dust the parts two or three times daily with an absorbent powder. Among these, Taylor's cimolite is specially mentioned. This is a fine and scarce natural variety of steatite, found most abundantly in Spain, and composed principally of silicate of magnesia: it is perfectly bland and unirritating, and has a smooth, oily feel. To any of the powders used a little powdered camphor may be added to allay the burning heat. A very good application is a cold potato-starch poultice, a small quantity of absorbent powder being sprinkled on its surface. The most soothing ointment is that of which the formula is as follows:—

|   |                  |          |    |
|---|------------------|----------|----|
| R | Bismuth oxidi, . | ʒj.      |    |
|   | Acidi oleici, .  | ʒj.      |    |
|   | Ceræ albæ, .     | ʒiij.    |    |
|   | Vaselini, .      | ʒix.     |    |
|   | Ol. rosæ, .      | gutt. j. | M. |

For the removal of infiltration of the skin in chronic cases, soft soap, liquor potassæ, and solutions of caustic potass are all useful. While these preparations are being used, cold water forms a very agreeable and useful adjunct. The affected parts may be bathed with it, or the water poured over them from a height by means of a watering-can, or cloths wrung out of it may be laid on the parts in the intervals between the other applications. These means ameliorate the itching and substitute pain; and sedative lotions or ointments may also be used at intervals, rather *than giving way to the desire to scratch*.—*Journal of Cutaneous and Venereal Diseases*, June 1883.

**REMOVAL OF A TIGHT RING FROM THE FINGER.**—A novel method of effecting the removal of a ring which has become constricted around a swollen finger, or in any other similar situation, consists simply in enveloping the afflicted member, after the manner of a circular bandage, in a length of flat indiarubber braid, such as ladies make use of to keep their hats on the top of their heads. This should be accurately applied, beginning, not close to the ring, but at the tip of the finger, and leaving no intervals between the successive turns, so as to exert its elastic force gradually and gently upon the tissues underneath. When the binding is completed, the hand should be held aloft in a vertical position, and in a few minutes the swelling will be perceptibly diminished. The braid is then taken off and immediately reapplied in the same manner, when, after another five minutes, the finger, if again rapidly uncovered, will be small enough for the ring to be removed with ease.—*Journal of Cutaneous and Venereal Diseases*, July 1883.

## PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. ED.

ADHERENT AND CONTRACTED PREPUCE, COMMONLY CALLED CONGENITAL PHYMOSIS.—In the *Philadelphia Medical Times*, 30th June 1883, Dr De Forest Willard has a paper on this subject. He has found adherent prepuce very frequent in boys under three, and that it usually becomes gradually liberated by the manipulations of the individual. While this adhesion continues there is always an appearance of elongation and contraction of the prepuce, which has often led to the sacrifice of this fold. His desire is to demonstrate that this adhesion is a very common condition; that it should not be blamed for all the disorders attributed to its existence; that in the majority of cases it is remediable by simple measures, yet that its continuance may lead to extremely serious consequences; and that wherever resultant symptoms occur the glans should be uncovered by stripping, or, rarely, by circumcision. He has rarely found in children under thirty months that the foreskin was entirely free from the glans. As boys pass this period the line of adhesion recedes from the meatus little by little, until, at five, about one-half of the glans can be exposed; at seven there is still a rim of agglutination in front of the corona; and at ten the fold can be retracted without much trouble. When the prepuce is simply adherent and not contracted, the lad will become his own surgeon and speedily effect a cure. This operation is hastened also by the very common practice with boys of closing the outlet of the foreskin and then filling the pouch with urine, which exercises a very powerful stretching influence. When true phymosis, however, exists, the surgeon should be the operator, as the boy's manipulations will tend to establish habits which may prove very injurious afterwards. The author recommends that the surgeon should retract the foreskin in the more severe cases, wipe away the retained smegma, and pack the cavity behind the corona with oiled absorbent cotton. After the soreness and œdema have passed away, daily retraction, with the use of oiled cotton, will prevent adhesion. He now circumcises about one-tenth as many patients as formerly, and finds the procedure described above generally sufficient. In cases where the prepuce is still more contracted, a few moments' dilatation with the ordinary dressing-forceps will permit the manipulation described, and a few days of stretching will give a freely movable prepuce. In cases of the next degree of contraction, forcible dilatation with phymosis forceps or with a cervix uteri dilator, or a slight incision made through the mucous surface, will liberate the stenosis and expose the glans. The use of a probe is sometimes necessary to tear up the adhesions. When the contraction is extreme, the shortening and condensation of the inner layer great, or where the orifice is so small as to seriously



interfere with the escape of urine, circumcision should be practised without hesitation. In boys past the age of twelve, and in adults in whom congenital phymosis still exists with adhesion, an operation is demanded in a much larger proportion of cases than would be requisite in the same apparent amount of narrowing in young children. Regarding the Jews, the author does not believe that they are more virtuous than Gentiles, or less liable to syphilis, or in a healthier condition than are those individuals who are willing to give their penis the same care that their hands and feet receive. The results of contracted prepuce are exceedingly varied. First, *frequent priapism*, caused by the constrained position of the glans and the irritation of the retained smegma. The next result commonly observed by the author is *dysuria*. It is chiefly in these cases that true convulsions occur. *Nocturnal incontinence* is frequently associated with dysuria, and is often relieved by liberating the glans. He has noticed a few cases of *pavor nocturnus*, or *night terror*. The child, usually from two to four years of age, starts from a deep sleep with a sharp cry, followed by expressions of fear or sorrow, trembling violently, or striking vigorously at a supposed enemy. *Prolapsus ani* and *hæmorrhoids* are sometimes produced by the excessive straining of dysuria connected with preputial stenosis. The coexistence of *hernia* has been frequently observed by Dr Willard. Such conditions as *struma*, *Pott's disease*, *morbus coxarius*, epilepsy, gastralgia, diabetes, uræmic poisoning, etc., have been ascribed to genital irritation. Passing to the effects of *nervous phenomena*, he says, "I am sometimes inclined to feel that the existence of reflex symptoms is still debatable, and that we are too often inclined to refer choreic, incoördinate, and irregular muscular movements to genital irritation simply because an adherent or contracted prepuce is found to exist; but the more I study these cases of lack of coördination and eliminate every other reasonable causative influence, and the more I review the notes of my cases, the more satisfied I am that reflex movements do sometimes occur from this as a sole or most probable cause, and that the removal of this cause acts most promptly and permanently in effecting a cure."

THE CONTAGIOUS DISEASES ACTS.—*The British Medical Journal*, 4th August 1883, quotes the following from the *Western Morning News*:—"Gradually, but surely, noted by but few, but terribly real in its progress, foul mischief is spreading in the three towns (Plymouth, Stonehouse, and Devonport). Ever since Mr Stansfeld's resolution was allowed to have the effect of a legal enactment, its results have been causing consternation to the doctors, embarrassment to the police, prospective misery to hundreds of innocent women and children unborn, profit to the chemists, and the increase of sin and sinners. Comparing the last ten weeks with ten weeks a year ago, we learn, on incontestable authority, that there are now in



the Military Hospital, Stoke, 184 patients against 118; in the Naval Hospital, Stonehouse, 100, as against 45. In each case, for reasons easy to explain, the numbers would have now been considerably less, instead of more, but for Mr Stansfeld; and the character of the disease is daily becoming worse. On the other side of the picture, and accounting for what has been stated, there are now in the female lock-wards twenty inmates, whereas the number, estimated on past years, should have been forty-five. The number who have voluntarily entered has been 30, as against 130 who should have been admitted. These figures, however eloquent they may be, tell but a fraction of the sad tale." [If the evils resulting from the withdrawal of the compulsory clauses of the Contagious Diseases Acts are so terrible, why were the benefits of the unmutilated Acts not proportionately great?]

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### PERISCOPE OF STATE MEDICINE.

By JAMES ALLAN GRAY, M.A., M.D. Edin., F.R.C.P.E.

THE POISONOUS DOSE OF CARBOLIC ACID, COMMON THYMOL, CYMENTHYMOL, AND RESORCIN.—S. Fubini and A. Russo Giliberti (*Moleschott's Unters.*, xiii. 2 and 3, p. 237, 1882) have been experimenting on guinea-pigs with intent to discover the relatively poisonous dose of the above substances. The animals were kept without food for twelve hours before being experimented on, and the drugs were administered in an alcoholic solution injected subcutaneously by means of Pravaz's syringe. The absolute quantity of injected material was regulated by the weight of the animal, and after the injection the animal was placed under a large glass globe for observation. Of the four drugs, thymol was found to be the least poisonous, since its smallest lethal dose amounted to 110 centigrammes per kilogramme of weight of the animal. On the other hand, carbolic acid, resorcin, and cymenthymol were each much more poisonous, for the smallest fatal dose in each of the three amounted to 70 centigrammes per kilogramme of body weight.—*Schmidt's Jahrbüch*, Band 197, No. 3, p. 233.

DANGER OF MISTAKING BISMUTH FOR LEAD IN ANALYSIS OF THE URINE.—Dr Putnam of Boston, in a paper on lead-poisoning, calls attention to this fact, which was first brought to his notice by Prof. E. S. Wood. In order to be certain of this possible cause of error, Dr Putnam, after having had his urine tested and found free from lead or bismuth, took daily for two weeks doses of bismuth varying from thirty to forty-five grains. Traces of bismuth were still to be found in the urine by the usual lead tests as late as four weeks afterwards. In examining the urine for either lead or bismuth, Dr Putnam suggests that iodide of potassium should always be given for two or three days before the analysis, and that a large quantity of urine should be collected.—*Medical News*, 30th June 1883, p. 740.

**THE POISON OF ERGOT.**—"In a recent communication read before the Chemical Society of Russia, the author, A. W. Pehl, attributes the toxic properties of ergot to putrefactive changes set up during decomposition of the vegetable fibrin of the wheat. The poisonous products of putrefaction, denominated ptomaines, are due to the peptic action of the ergot, which is exerted to a very considerable extent, and so contributes to the splitting up of the elements of flour and their subsequent putrescence."—*Philad. Med. and Surg. Rep.*, 5th May 1883, p. 501.

**INHALATION OF OXYGEN IN POISONING WITH ILLUMINATING GAS.**—Two cases of poisoning with illuminating gas are reported by Dr Alonzo Clark, in both of which the administration of oxygen by inhalation was followed by recovery. Both cases were insensible on admission to hospital, and both were cyanotic, with small, feeble pulse, cold extremities, lowered temperature ( $96^{\circ}5$  F. in one case), and contracted pupils. In both cases involuntary evacuations had occurred. One had trismus with rigidity of the flexor muscles; the other had clonic spasms involving the left side of the body, and bird-claw contraction of the fingers of both hands. In the former case the treatment by inhalation of oxygen was supplemented by the use of dry cupping and hot-water bottles, tincture of digitalis, whisky, and occasional flagellation. In the latter case one-sixtieth of a grain of sulphate of atropia was given hypodermically during the employment of the oxygen treatment.—*New York Med. Journal*, 11th August 1883, p. 148.

**POST-MORTEM EXAMINATION OF THE THORACIC AND ABDOMINAL VISCERA WITHOUT INCISION OF THE ABDOMINAL PARIETES.**—How this may be done in cases where a more complete post-mortem examination is refused is described by Dr H. A. Kelly of Philadelphia. He gives preference, in the case of a male cadaver, to a perineal incision, and in the case of a female to a vaginal incision. Examination through the rectum, which he practised in one case, left the anus large "and gaping, a far more conspicuous object than the closed perineal wound well concealed by the legs and scrotum." One case on which Dr Kelly operated was that of a man five feet nine inches in height, who measured over the surface of the body twenty-nine inches from the top of the sternum to the perineum. In this case the hand in the interior of the body could easily touch the first intercostal spaces.—*The Medical News*, 30th June 1883, p. 733.

**ELECTROLYSIS IN ESTIMATING THE NITRATES IN WATER.**—In the *Journal of the Chemical Society*, vol. xxxix. p. 100, Mr Whiteley Williams describes how the amount of nitrates in water may be estimated by reducing the nitric acid to ammonia by means of a copper-zinc couple, and nesslerizing a few cubic centimetres of the water so treated. This process and other readily available methods of estimating the amount of nitrates have been made the subject of exa-



mination by Mr R. B. Lee, of University College, London. Mr Lee found that Crum's method by reduction to nitric oxide was most satisfactory for regular use in the laboratory, and, on repeating Mr Williams's experiment, that after trying various modifications the following are the conditions of greatest accuracy:—"First, The nitric acid should only be present in small quantity—best not more than ten or twelve grains per gallon. Waters containing more than this should be proportionately diluted with distilled water. Secondly, The couple is most active in slightly acid solutions. I find it best to acidify with oxalic acid, which has the advantage both of precipitating the lime and of forming an insoluble compound with the zinc. The method of procedure is as follows:—The couple is made by immersion of clean zinc foil in a three per cent. solution of copper sulphate for ten to fifteen minutes. It is then gently washed, and about one square decimetre placed in a wide-mouthed stoppered bottle of 300–400 cc. capacity. About 0.5 gramme of oxalic acid is added, and the bottle filled with the water to be analyzed. The reduction may then safely be assumed to take place in the cold in 24 hours; but if the bottle be heated in a water-bath to 55°–60° C., the reduction will be found to be completed in 1½ to 2 hours. From 2 to 10 cc. of the water are now carefully withdrawn in a graduated pipette, made up to 50 cc. in the Nessler glass with ammonia-free water, and nesslerized in the usual way. The use of oxalic acid enables the temperature to be raised to 60° C. without loss of ammonia, and the reduction is then completed rapidly. The oxalic acid used must, of course, be free from ammonia and nitric acid." The use of granulated zinc instead of zinc foil was found to give very uncertain results.—*Analyst*, August 1883, p. 137.

**SPONGILLA FLUVIATILIS IN THE WATER-SUPPLIES OF AMERICAN CITIES.**—Mr Chas. R. Fletcher of Boston University read before the Society of Public Analysts, on 27th June 1883, a paper "On the Cause of a Peculiar Condition of some American Water-Supplies," in which he showed that the peculiar "fishy," "metallic," or "cucumbery" taste and odour that had from time to time affected the water-supplies of Boston and eleven other American cities was due to the presence in the water of the fresh-water sponge, *Spongilla fluviatilis*. Heating intensified this bad flavour and odour, and rendered the water practically useless for potable purposes. In the analyses undertaken it was noted that if the specimen of water stood for a time, the amount of the free ammonia increased at the expense of the albuminoid ammonia, thus showing that further oxidation of the nitrogenous products was taking place, and this went on until all the albuminoid ammonia disappeared. The mud taken from the bottom of the reservoirs had no smell at first, but gradually developed this by exposure to the air. For a time the smell increased, and then disappeared. Microscopic examination of the mud showed plants belonging to the Nostoc family in quantity, but these when separated



had no odour. Spicules of sponge were also noticed, and at the screen of the gate-house, where the bad odour was more manifest, more of the sponge was found. Experiment showed that the odour came from this sponge. The best way to detect the odour in water slightly affected was to pass a pint or so through ordinary filter-paper. —*Analyst*, August 1883, p. 134.

ICE AND CREAM AS CARRIERS OF INFECTION TO HOUSEHOLDS.—Dr R. Thorne Thorne, in a lecture delivered at Cheltenham on 15th March 1883, called attention to the above, and cited illustrations. In one case the use of ice from a local pond gave rise to a series of symptoms, including giddiness, nausea, vomiting, diarrhoea, severe abdominal pain, and high fever. Examination of the pond showed that the water had become foul from long-continued stagnation, and that on being stirred up it “emitted an intolerably offensive odour.” There is a popular belief that the noxious ingredients which a water may contain are eliminated or rendered inert by the process of freezing. But this is only partially correct. “Water, in freezing, undoubtedly frees itself from substances which in solution will necessarily give a fluid specific gravity greater than water alone, and also from those fluid substances which require a lower temperature for congelation. But even in these cases the frozen water retains traces of these substances more or less entangled throughout its mass, and solid particles floating in suspension or entangled in the ice, and these vary in size from a floating carcase, or faecal matter, down to the extremely minute germs of infectious bacteria.” The presence of living germs in pond ice has been demonstrated by artificial cultivation; and that the organisms of at least some specific disease are not destroyed by freezing is proved both by Dr Klein’s experiments with *Bacillus anthracis* and also by the fact that animals have died of anthrax “while the temperature was below zero, after they had licked the frozen blood” from a boat on which the hide of an anthrax steer had been carried. In the concluding part of the lecture an outbreak of scarlet fever is traced to the use of cream which had been obtained from a dairy where one of the staff engaged in milking and carrying out the milk had a suspicious history of a recent attack of the exanthem.—*Practitioner*, July 1883, p. 72.

IS THE CURRENT THEORY THAT TYPHOID FEVER OWES ITS ORIGIN TO SEWER GAS EXPLODED? AND IS THE GREATER FATALITY OF TYPHOID FEVER IN THE COUNTRY CAUSED BY GREATER IMPURITY OF THE DRINKING WATER COMPARED WITH THAT OF THE CITY?—Under this lengthy heading Dr George Hamilton of Philadelphia discusses the question of the contagiousness of typhoid fever. He holds that sewer gas is in no way, either directly as cause or indirectly as the vehicle of the cause, concerned in the production of typhoid fever. But he gives no new facts in support of this view, beyond the recital of two sets of cases, in each of which the first case was evidently due to contagion caught at a distance, and the subsequent

cases developed therefrom. The drainage in each of the two sets descended the slope from the source of the water, so that contamination of the water-supply was held to be impossible. Dr Hamilton concludes that "typhoid fever, scarlet fever, diphtheria, and dysentery may not, under certain favourable conditions, be contagious; but under other conditions, as when these diseases are malignant and the subjects crowded together—for example, three in the same room, as occurred in the family just alluded to—they are regarded by an immense majority of the most able, unprejudiced, and experienced physicians as eminently contagious." It should be remembered, however, that, apart from causing other evils, overcrowding, at least in the case of typhoid fever, leads to an increased probability of direct infection—a mode of transmitting the disease which appears to explain in a thoroughly satisfactory way all so-called cases of contagious typhoid.—*Philad. Med. and Surg. Rep.*, 16th June 1883, p. 649.

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### SURGICAL PERISCOPE.

RESECTION OF THE LUNG.—S. L. Walton, in a letter dated Berlin, Feb. 19, 1883, gives an account of this operation as proposed by Dr Block of Dantzig. Dr Block, it will be remembered, attempted the operation on a young lady relative. The result was fatal, and it is even said that there was no call for its performance, as the lungs were healthy. Legal proceedings were instituted, but the unfortunate operator took his own life by shooting himself through the head. Dr Walton had the advantage of seeing Dr Block operate on rabbits in the laboratory of Professor Virchow in June 1882. Besides showing specimens of lungs which had been operated on, he exhibited living and lively animals on which similar operations had been performed without apparent detriment to the general condition. In one of them, a rabbit, from which the upper lobe of the left lung had been removed some months previously, he made an incision through the skin in the median line, and exposed the thorax by dissecting away the skin so as to show the wound in the third intercostal space, and to demonstrate the fact that the remaining lobes of the lung had become expanded so as to occupy more or less completely the place of the excised one. The thoracic wall was not drawn in, and the lung could be seen through the intercostal space, moving up and down over the region formerly occupied by the excised lobe. The antiseptic precautions were very simple; no one was allowed to touch the animal without disinfected fingers, and the operator, after washing his hands in a 2 per cent. solution of carbolic acid, rubbed pulverized naphthaline over them. He also rubbed the naphthaline over the region to be operated upon before making the incision, and used the same freely in the wound. After sewing up the incision, the wound was dressed with dry absorbent cotton



covered with naphthaline, which was secured by a thin bandage similarly disinfected. Several of the animals operated on were also shown at the Surgical Congress in Berlin. Among them was a small dog, the upper and lower lobes of whose left lung had been removed about five months before. Immediately after the operation it ate, and after forty-eight hours barked loudly and constantly. Seventeen days after the operation the wound was healed to a granulating line. Twenty-one days after, the pleural cavity was again opened, and no pathological appearance was found in the interior. Stretched across its upper part were several thin bands of connective tissue. Ten days after the second opening the wound was again healed to a granulating line. Dr Block believed that a hitherto insurmountable difficulty in the treatment of pulmonary phthisis had been overcome, and that experimentation had shown that we may enter the pleural cavity with impunity. Upon the fact that the disease began as a local process he based his hope of cure by removal of the affected lobe, having first ligated it, through an intercostal space. He considered resection of ribs unnecessary, as, even when infiltrated with tubercular deposit, the lobe could be removed through an intercostal space in the cadaver. Drainage he held to be unnecessary, as all unhealthy tissue was, or ought to be, removed, and he had never seen inflammation set up by the blood, secretions, or portion of lung behind the ligature. It also interfered with the expansion of the lung, and, he thought, added to the risk of introduction of inflammatory germs. In the case of empyema appearing, there was always time to remove the fluid under known rules.—*Boston Med. and Surg. Journal*, 15th March 1883.

WOUND OF PERINÆUM EXTENDING INTO VAGINA; COMPOUND SEPARATION OF SYMPHYSIS PUBIS, WITH PROTRUSION OF BLADDER. —A negress, æt. 23, endeavouring to escape from the police about midnight, April 18th, fell four stories from the eaves of a house, and struck upon the end of an empty wooden ash-barrel, with presumably her left leg inside. She was brought into the City Hospital in a state of shock, and under the influence of opium, about nine hours later. There was history of profuse hæmorrhage, but after she entered the bleeding was slight. An examination made revealed the following injuries: a deep, jagged wound starting at a point a little to the left of the coccyx, and following the gluteo-femoral fold to the posterior part of the left labium majus; a rent through the posterior wall of the vagina; separation of the soft parts from the arch of the pubes; a rough wound through the mons veneris, through which protruded the separated ends of the pubes, and behind them fell the bladder. This was the principal injury. There were some scratches on the right labium. The hand could be passed freely up beside the rectum and vagina, and into the subperitoneal space above the bladder. There was



no evidence of any wound into the rectum or peritoneal cavity. The separation of the symphysis was made out to be 2.5 inches. The bladder was replaced and a catheter inserted, the vagina tamponed, the wound drained, and the symphysis brought together and fixed by a canvas pelvic jacket. For a time the patient's condition was very critical, and, in spite of the bladder being daily washed out with 1 per cent. solution of carbolic acid, cystitis occurred. This being overcome, she gradually improved, and in three months' time she was able to walk with crutches. When she left hospital she could walk on a floor or level ground without difficulty, but had some trouble in going upstairs.—Dr C. D. Homans, in *Boston Med. and Surg. Journal*, 12th April 1883.

**SLOUGHING OF THE MUCOUS MEMBRANE OF THE BLADDER.**—The patient, æt. 26, had cystitis after her first confinement, which occurred in Boston Lying-in Hospital, December 27, 1880. The perinæum was torn, and united with sutures. Catheterization was required during the first week. Symptoms of cystitis developed, but in a mild form, not marked enough to call for treatment. They persisted, however, till she left hospital on the fifteenth day after delivery. Eighteen days after she left severe retention occurred, and on an attempt being made to pass the catheter it was felt to be obstructed at the meatus. A sloughy, shreddy mass was then seen to be protruding. By using some force this was extracted by the fingers, but torn in the process. Immediately there came a gush of very fetid, ammoniacal urine into the bed, giving instant relief to the pain. The specimen consisted of two very irregular-shaped pieces of membrane, one 5 inches long by  $1\frac{1}{2}$  inches wide, the other  $3\frac{1}{2}$  inches long by  $2\frac{1}{2}$  inches wide. They were somewhat elastic, not very tough, and had rather a saccular form. The exterior was of a whitish colour, smooth, but not homogeneous, as there could be distinctly seen what looked like fibrous bands running in various directions. The interior was of a darker colour, and everywhere covered with a gritty deposit, which could be easily scraped off. No orifices of ureters or urethra could be made out. Owing to the torn condition of the specimen, it was impossible to ascertain whether it was a complete cast of the bladder or not. Dr Whitney, who examined it microscopically, pronounced it to be real tissue, and not the results of an exudation, and, further, that it was connective tissue such as might be found in the mucous and submucous tissues of the bladder. The patient improved slowly, being subject to incontinence, particularly on laughing, coughing, or sneezing. There was also occasional hæmorrhage. In April a digital examination of the bladder was made under ether. The portion of urethra at the neck was found to be dilated, standing open, with thick indurated walls. The bladder itself was sufficiently capacious. Its surface was smooth and free from deposit. It was

evident that the cause of the symptoms was a relaxation or want of tone in the sphincter and urethra. The examination did not increase the incontinence. Electricity from a Gaiffe battery was afterwards applied at regular intervals to the entire length of the urethra, with a satisfactory result, the incontinence being entirely overcome.—W. J. Otis, M.D., in *Boston Med. and Surg. Journal*, 17th May 1883.

**CARCINOMATOUS OSTEOMA OF THE FEMALE MAMMA.**—Mrs —, æt. 74, mother of seventeen children, discovered in May 1880 a tumour as large as a pea in the left breast, which gradually developed some of the signs of scirrhus carcinoma, such as extreme hardness, retraction of the nipple, and lancinating pains, without, however, deep attachments or involvement of the axillary glands. The entire breast was removed, on the 10th of November, by Dr Hunter M'Guire of Richmond, Va., who found a bony tumour loosely embedded in the organ, which he kindly presented to me. The neoplasm was almost spherical, nodular, densely hard, and inelastic, and enclosed in a connective tissue capsule, through which it was thoroughly isolated from the surrounding tissues of the mamma. On section, which could only be made with a saw, it measured three centimetres and a half in diameter, and the cut surfaces presented a pale granite-like appearance, with white islets of fibrous tissue, which constituted about one-sixth of the entire mass, including a peripheral margin one millimetre in diameter for about one-half of its circumference. Minute examination of sections treated with hydrochloric acid, conducted by Dr H. F. Formad and myself, disclosed an osseous framework, the meshes of which were filled partly with a lymphoid tissue containing giant-cells and representing young bone-marrow, and partly with glandular tissue undergoing carcinomatous transformation or completely converted into typical carcinomatous structure, *i.e.*, an alveolar fibrous stroma, containing cylinders or plugs made up of epithelial cells. At rare intervals the acini were normal. The tumour was evidently, in the first instance, a fibroma containing glandular elements, or an adenoid fibroma which was gradually being transformed into an osteoma, when the irritation of the plates of bone excited a typical growth of the cells of the acini, through which carcinoma was engrafted upon it. The presence of a fibrous capsule, whereby the neoplasm was isolated from the remainder of the mamma, was of itself sufficient to exclude the idea of primary osteoid carcinoma, and this view is strengthened by the freedom from local recurrence and invasion of the axillary glands, as the patient remains well two years and four months after the operation. As I have pointed out in the chapter on fibroma in my *Practical Treatise on Tumours of the Mammary Gland*, ossification is a very uncommon transformation of a fibroma, and I may add that, as far as I know, the specimen now described is unique.—Prof. S. W. Gross, in *Philadelphia Medical News*, 5th May 1883.



**HAMAMELIS IN THE TREATMENT OF VARICOSE VEINS.**—Dr J. H. Musser of Philadelphia, writing in the *Medical Times*, 21st April 1883, asserts that witch-hazel (*Hamamelis Virginica*) has not only a wonderful power in the control of hæmorrhage, but also that varicose veins can be cured by the internal administration of the fluid extract in teaspoonful doses three or four times a day. He supports his views by the histories of four cases, three being cases of varicose ulcer, and the fourth of varicose veins during pregnancy. The records of the first two are somewhat meagre, and the author makes the amusing admission that he missed varicosity of the veins in a case of ulceration which he attributed to syphilis. In the third patient, a labouring man, the use of the hamamelis was followed by disappearance of the œdema, healing of the ulcers, and the veins were greatly lessened in size. Extensive skin induration and ulceration were, however, left. In none of these cases is it mentioned what local treatment, if any, was adopted. In the fourth case we are told the drug was applied in the form of lotion as well as administered internally. [On the whole, it seems doubtful that we have yet sufficient proof that witch-hazel cures varicose veins.—J. M. R.]

**ASPIRATION OF SUPPURATED JOINTS.**—Where pus has formed in an important joint, too often the case is looked upon as all but hopeless, and resection, or even amputation, is urgently demanded. Since the introduction of the antiseptic treatment and the aspirator, that is an exploded theory, as numerous cases I could narrate would show. I will, however, content myself with mentioning a few. Thus, an old soldier, John Mulliphant, æt. 60, whose patella had been fractured in the Crimea in 1855, and who subsequently (twenty years after), from a slight injury, had synovitis which ended in suppuration in the same knee-joint, was cured by two aspirations, at each of which about four ounces of pus were evacuated. These aspirations not only sufficed to cure the patient, but also left him with a useful joint. James Longmore, æt. 13, the subject of hip-disease in the third stage, was relieved by three aspirations, at each of which about six ounces of pus were removed, the joint disease being meanwhile treated by an extension apparatus, and the patient in four months leaving the hospital with a Thomas's splint, and without any abscess having broken externally. Recently I have had in the Queen's Hospital a crucial case of this sort. It was that of a boy, A. D., æt. 13, who had a periarticular abscess of the knee, following an injury to the bursa patellæ. Three free incisions were made into the cellular tissue by Mr Jordan Lloyd. Pus, however, formed internal to the joint twelve days after the first incision. As soon as fluctuation was distinct, half a pint of pus was drawn off by the aspirator, an elastic bandage applied, and from that time no further formation of matter took place, and the boy made a good recovery. I have never before seen suppuration



in a joint permanently relieved by a single aspiration, and I regard this as a rare case as well as an exceptionally fortunate one.—J. F. West, F.R.C.S., in *Birmingham Medical Review* for April 1883.

OPERATION FOR VICIOUS UNION OF FRACTURED PATELLA.—Mr Jordan Lloyd, in the same journal, reports a case of this nature on which he operated with success, and takes the opportunity of discussing the advisability and method of suturing fractured patellæ which have resisted all the more simple means of treatment. He says the question surgeons have to ask themselves is not, "Ought we to operate in all badly united fractures of the patellæ?" but, "Whether, in a limb whose function is seriously impaired by the ligamentous union of a broken patella, we are justified in submitting a patient to a not very dangerous operation, which experience has shown to yield satisfactory results in a large percentage of cases?" Each case will have to be considered on its merits, for, besides mere impairment of function, we shall have to pay proper regard to the age, health, and occupation of the patient, the duration of the injury, and the distance the fragments are apart. With regard to age and health, the same considerations hold here as in all other major operations of expediency. The demands made by the patient's occupation upon the injured limb will have to be carefully estimated: that which may be a decently useful leg to a tailor or a clerk may, on the other hand, be quite inadequate to the requirements of a blacksmith or bricklayer. The length of time which has elapsed since the accident will have to be borne in mind, because we shall find that the difficulties of approximation increase proportionately with the duration of the injury: the older the injury, the further will the fragments be drawn apart; not only so, but the greater the difficulty in bringing them together by operation, in consequence of organic alterations in the ligaments and muscles appertaining to the joint. As to the method of operating, the incision may be longitudinal or transverse, but must be done only under the full protective influence of some antiseptic method. The longitudinal incision is the best for access and healing afterwards, but necessitates additional and dependent openings in the joint for drainage. The patellar fragments, being exposed, are pared, this being done best with a Hey's saw. Wires of silver, iron, or platinum are then inserted into holes made by an awl through bone only, the articular cartilage being avoided. These wires may be left in permanently or removed by incision six or seven weeks afterwards. One of the most uncertain parts of the operation is encountered in bringing the fragments into apposition. When any difficulty is met, it should be first determined that there are no adhesions between the fragments and the femoral condyles, and then Malgaigne's hooks should be used in the ordinary way for the purpose of temporarily dragging the bones together; next, lateral incisions should be made through the capsular ligament by

the sides of the fragments; next, the tendon of the quadriceps should be divided subcutaneously about three inches above the upper fragment; and lastly, the lig. patellæ should be similarly dealt with. This tendon division is apt to be followed by extensive atrophy of the muscles in front of the thigh, which might, however, be prevented by occasional galvanism. Drainage of the joint is of vital importance, lateral punctures as deep as possible being made when the longitudinal incision is used. The limb is then dressed and put up in plaster of Paris or a M'Intyre or Gooch's splinting. Passive movements should not be begun too soon, it being best to leave joints stiffened by inflammation to time and nature to relax, on the principle that continuous passive movement means chronic irritation, and this means chronic inflammation, thereby perpetuating the very stiffening we are endeavouring to overcome.

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#### QUARTERLY ABSTRACTS OF PAPERS ON THE DISEASES OF CHILDREN.—No. III.

By J. MILNE CHAPMAN, M.B., M.R.C.P.E., M.R.C.S.

[These Abstracts will chiefly be taken from American and Foreign Periodicals.]

TAPE-WORM IN CHILDREN, Monti, Vienna (*Archiv f. Khlkunde.*, Bd. iv. 5 and 6).—The writer commences by stating that authors have regarded the occurrence of tape-worm in children as being rare. He then gives details of all the cases observed in the policlinique of Viennaduring the last ten years. From these he states that tape-worm occurs much more frequently during childhood than during later life; and further, that its frequency of occurrence is increasing from year to year in Vienna. He has observed 242 cases among 44,652 children (18 per 1000). Girls appear to be oftener affected than boys, a circumstance which he is unable to explain. His youngest patient was three months old, but he alludes to a case which was noticed at the age of five days. The majority of his cases occurred during early childhood. Of 240 patients, 149 were under five years. From the age of five upwards the frequency diminishes till puberty, when there is again an increase. As to the class of individuals affected, he finds that among the well-to-do shopkeepers, who can afford a good deal of flesh food for their children, tape-worm occurs oftener than among the poorer classes. In summer more cases were noticed than in winter. As regards symptomatology, he states that the most constant indication was the appearance of segments in the stools. Local symptoms as a result of tape-worm he seldom observed. Among such were, enteralgia with localized colicky pains around the umbilicus; an undefined ill-health and irregularity of the bowels; sickness was seldom noticed, and, when it occurred, accompanied the colic. Appetite was usually normal, occasionally diminished. In the majority of cases there was meteorismus. Delicate children were not oftener



affected than were the strong. Reflex phenomena as the result of *tænia* the writer never noticed, but he states that their occurrence cannot be denied, in consequence of numerous reported cases. Dangerous symptoms never occurred. Only once in private practice has he seen a complete tape-worm expelled without the use of anthelmintics. The following he gives as the order of frequency in occurrence of the varieties:—*Tænia solium*, *tænia mediocanellata*, *tænia elliptica*, *tænia bothriocephalus latus*. *T. mediocanellata* occurred most frequently in nurslings and young children. *T. solium* occurred most frequently in the writer's dispensary practice, and this he attributes to the fact that the lower classes in Vienna partake largely of sausages and pork. *Bothriocephalus latus* was not observed among the cases. Prophylaxis the writer urges as more important than treatment. For the affection he advises a preliminary laxative. For healthy children under one year he uses the "Vienna laxative water." Where there is dyspepsia or stomach catarrh he uses podophylin; in older children senna, rarely castor-oil. As anthelmintic he employed formerly a cold infusion of pomegranate rind, 1 to 2. Now he employs the following:—Cortic. rad. *punicæ gran.* 1 part, water 2 parts; macerate for forty-eight hours, and decant. Of this each child, irrespective of age, was given 100 to 150 g. If the tape-worm was not expelled in from three to four hours, a further laxative was administered. Extract of male fern he regards as somewhat uncertain, and only to be relied on when freshly prepared from carefully selected plants. In conclusion, he states that in a few cases both those remedies, as also kousso, had to be employed before the tape-worm was expelled.

PARTIAL RESECTION OF THE NASAL SEPTUM FOR SEVERE DISTORTION, Hartmann (*Deutsche Med. Wochenschrift*, No. 51, 1882).—The writer details three cases in which he performed this operation. One, a 14-year old boy, had been for four years subject to convulsions occurring twice or thrice in the week. The mucous membrane of the nose was greatly swollen, and the lower part of the septum projected towards the left, thus greatly obstructing the entrance of air. The obstructing portion was removed with bone forceps. The wound healed in three weeks, but a second operation had to be undertaken to remove a portion of the cicatrix. During the succeeding three years the boy has had no convulsions. Along with this case the writer alludes to one where attacks of asthma ceased after removal of nasal polypi.

OPERATIVE INTERFERENCE FOR HYDATIDS IN THE ABDOMEN, ESPECIALLY IN THE LIVER, Leopold Landau (*Archiv f. Klin. Med.*, Bd. xxviii.)—The writer alludes to the operative methods of Volkmann and Lindemann, and offers the following as preferable to either of them:—The abdomen is incised, and the cyst, held firmly against the opening, is first emptied of its contents by aspiration, and then



incised and its edges stitched to the abdominal wall. Healing is accomplished by the growth of granulation tissue. He advises that a preliminary tapping for diagnostic purposes should be employed before operating, and he cautions against making the incision too far from the border of the ribs, on account of the inclination of the liver, and its liability to recede towards the diaphragm. He strongly advises the completion of the operation at one sitting. The case he describes occurred in a 6-year old girl who had played a great deal with dogs. He found two large echinococcus sacs in the liver, and emptied them both, employing two incisions. In six weeks recovery was complete. A former case operated on by the same writer will be found in the *Berliner Klin. Wochenschrift.*, 1880, Nos. 7 and 8.

THE PURELY DIETETIC TREATMENT OF NUTRITION MALADIES OF SUCKLINGS, Biedert (*Deut. Med. Wochens.*, Nos. 3-5, 1883).—After mentioning numerous cases, the following conclusions are drawn:—  
 1. A very large number of stomach and intestinal affections in nurslings are so closely related to the method of their feeding, that, simply through an alteration in the feeding, cure may be effected, and this even in very severe cases. 2. The quantity of nourishment is important. 3. Nourishment often requires to be given in a very diluted condition. 4. The proportion of albumen to fat in the food is an important element. Thus, a mixture of albumen with emulsified fat in greater proportion than it is found in cow milk, and more nearly approaching the proportions in human milk, greatly facilitates its digestion. 5. It must not be forgotten that occasionally a morbidly diminished fat resorption may occur, which necessitates either a diminution of the proportion of fats, or—remembering the facts as to albumen digestion mentioned in 4—a proportion of fats between that in cow milk and that in human.

WHAT IS TO BE DONE WITH EPILEPTIC CHILDREN AS REGARDS SCHOOLING? Pelman (*Centb. f. Allgemeine Gesundheitspflege*, ii. 1).—The writer gives the numbers of children of an age to attend school, in Westphalia and the Rhine Provinces, who are epileptics, and shows that while a certain proportion are so severely affected as to prevent their attending school at all, a large proportion (nearly two for every school) do attend with the other scholars. This latter practice he regards as extremely unsatisfactory both for the other children—especially the girls—and for the epileptics themselves, whose peculiarities of temper and sudden outbursts of rage are misunderstood. As a remedy he would suggest the establishment of institutions for the education of epileptics only, which would be under proper medical supervision. One such he states has been in existence at Bielfeld for some time, and another is about to be opened near Düsseldorf.

THE ORIGIN AND TREATMENT OF STENOSIS OF THE TRACHEA AFTER TRACHEOTOMY, Kapeller (*Correspondenzblatt f. Schweizer*

*Aerzte*, 1882, No. 22).—The writer narrates a case where tracheotomy was performed in April 1880, on a 4½-year old child, on account of diphtheria, the trachea being opened above the thyroid. In consequence of a pneumonic attack and of excessive granulation growth in the trachea wound, the tube could not be removed till the 20th day. During the next year the child suffered from repeated attacks of breathlessness, and in September 1881 tracheotomy had again to be performed, this time below the thyroid. It was then found that the upper part of the trachea was compressed from side to side by an increase in size of the thyroid, and this to such an extent as only to permit the passage of a 3 mm. thick bougie. The isthmus and left side of the thyroid were removed; but when an attempt was made on the eighth day to remove the cannula, there occurred a fresh attack of difficulty in breathing, and as this was repeated on each fresh attempt being made to remove the tube, recourse was had to dilatation of the upper part of the trachea by means fully described in the paper. Eventually a good result was obtained.

CAUSES OF CONVULSIONS IN CHILDREN, Kjellberg (*Archiv f. Hlkkunde.*, iv. 7, 8).—The writer divides convulsions into symptomatic and sympathetic, direct and indirect, or central and peripheral. The symptomatic, on account of their frequent dependence on pathological changes in the circulatory system, he calls hæmatogenic. These changes may either be disturbances in the circulation, or alterations in the character of the blood. Among the former he notes anæmia of the brain, resulting from—1. Sudden loss of blood. 2. Excessive drain of fluids from the body, as from diarrhœa and vomiting, etc. 3. Arterial spasm occasioned by terror, anger, etc. 4. Compression of the skull in delicate children. 5. Anatomical changes in the brain, of various kinds. 6. Anæmia occurring in the course of inflammatory, febrile, and other affections. Hyperæmia of the brain is also mentioned, arterial and venous. The second group of symptomatic convulsions are those caused by changes in the composition or characters of the blood, as—1. An increase of temperature. 2. The poisons of various fevers—scarlatina, measles, etc. 3. Direct poisoning by mineral or vegetable poisons. 4. Poisoning by a self-developed poison, as in pyæmia, etc. At this point the writer considers the question of whether maternal emotions may so affect the milk as to cause convulsions in a child at the breast. He gives and alludes to several cases, and seems disposed to think that a severe fright or paroxysm of rage on the part of the mother might occasion convulsions were the child put to the breast shortly afterwards. Under the head of sympathetic convulsions, the various reflex exciting causes of fits are considered. In conclusion, the writer points out that in children, and even in very young ones, convulsions may be simulated.



WASHING-OUT OF THE STOMACH IN NURSLINGS, Epstein (*Archiv f. Khkunde.*, iv. 9, 10).—The writer alludes to the good results obtained by washing out the stomach in adults, in various kinds of indigestion, and urges that the same method may be employed in children. He shows that this has not often been done by others, but states that he and his colleagues in the foundling institution at Prague have done so some 400 times, in most cases to children of from two to eight weeks old, during the last three years. The washing-out of the stomachs of young children is, according to his experience, a very simple, easy, and well-borne operation, while at the same time he has found it free from danger. The apparatus he uses is the same syphon apparatus as is used for adults, but on a smaller scale, the stomach-tube consisting of a black gum-elastic catheter, No. 8, 9, or 10, with the eye somewhat widened. He employs washing-out in all cases where there are signs of stomach indigestion with loss of weight, and, in addition, he frequently takes the child wholly or partially from the breast, substituting white of egg in water—the white of one egg to half a litre. Several illustrative cases are given, and in the course of the paper, which is a long one, the writer records many observations which he was able to note, in cases subjected to this treatment, on the digestion of milk.

THE THERAPEUTICAL TREATMENT OF WHOOPING-COUGH, Cassel (*Ibid.*)—The writer has had the opportunity of observing very many cases in the Berlin policlinique, and has taken advantage of it to systematically test the various remedies in use for pertussis. In each case the following points were attended to:—1st, That the diagnosis was certain; 2nd, that the case was uncomplicated; 3rd, the effect of each remedy on the length of the attacks, on the number of the attacks, and on the length of the disease. The remedies employed he divides as follows:—1st, Narcotics, intended to operate by reducing excited reflex irritability; 2nd, antizymotics or antiseptics, applied topically to the larynx by inhalation or administered internally; 3rd, purely empirical remedies—so-called specifics. The conclusions he comes to are very vague, though the observations are numerous and evidently made with great care. Among the narcotics, belladonna and chloral, especially when combined, yielded good results. Of the antiseptics, quinine was found to be of about the same value as he had found belladonna, while carbolic inhalations and salicylic acid certainly diminished the intensity and the number of the attacks. The writer would look for a remedy in the future among the antiseptics, but in the meantime would place reliance on the narcotics. Quinine he regards as having a double action—on the nervous system, and as an antiseptic—when employed in whooping-cough.

TRACHEOTOMY IN CHILDREN UNDER TWO YEARS OF AGE, Chaym (*Ibid.*, 11, 12).—At the conclusion of this paper, in which the writer



urges the performance of tracheotomy whenever indicated, irrespective of age, full tables are given of collected successful cases. Of these 40 were under one year, and 181 were between one and two years of age.

GLAND-SWELLINGS IN THE CEPHALO-CERVICAL REGION OF CHILDREN TOPOGRAPHICALLY CONSIDERED, Parrot (*Revue de Méd.*, 1883, No. 4, p. 241).—In the anatomical introduction to this very interesting paper, the author states that it is an error to suppose that in newly-born children the lymphatic glands are relatively large, and that they diminish in size with increasing age. In the majority of cases, in healthy children, he states that the glands cannot be detected, and that it is only under pathological conditions that they become swollen, which they do in such a uniform and characteristic manner that their affection is of importance for the diagnosis and treatment of various lesions. He distinguishes the following groups:—Sub-occipital—mastoid and parotid—situated respectively behind and before the ear; sub-maxillary; supra-hyoid. In the neck the glands form a chain between the mastoid and supra-clavicular groups situated between the sterno-mastoid and trapezius, partly along the outer border of the sterno-mastoid. Among the affections of the head causing gland-swellings, the most important is eczema of the hairy scalp, arising either from constitutional causes or from the presence of lice. The first form occurs mostly in the early months, and affects various parts of the scalp. The second is most common in children over two years of age, and is usually localized to the back of the head. The glands affected in both instances are those between the sterno-mastoid and the trapezius and those around the ear. In the parasitic forms, only such glands are usually affected. In other cases the other groups also become involved, and the swelling is more decided and more painful. Pemphigus occasionally causes gland-swellings, which are, however, slight. All the groups except the sub-occipital may become affected from impetigo of the face. In regard to impetigo, the writer states that the non-specific form affects chiefly the cheeks, forehead, and ears, and the specific form the neighbourhood of the mouth, nose, and eyes. In hereditary syphilis the glands are very seldom affected, while in the acquired form they are almost invariably so. In herpes labialis and nasalis, swelling of the glands is unimportant and transitory. Affections of the mucous membrane of the nose may occasion swelling of the cervical glands. Affections of the tonsils of any kind are accompanied by gland-swelling. The first affected glands are the retro-maxillary, lying between the jaw and the sterno-mastoid, rather than the sub-maxillary. In severe cases of diphtheria there may occur, in addition to the implication of the glands, the well-known infiltration of the surrounding cellular tissue, which the author, along with all others, regards as a serious prognostic indication.

NOTE ON ALBUMINURIA OF CHILDREN, Leroux (*Ibid.*, No. 3, p. 202).—The writer examined the urine of 330 children—118 girls, 212 boys—all apparently in good health, the reagents employed being nitric acid and picric acid. In 1 in 11 of the girls and 1 in 23 of the boys albumen was present. Among these, however, are included five severe cases, which certainly cannot be reckoned as being physiological. Where only traces of albumen were found, they were more distinct after meals than in the morning.

PSEUDO-MENINGITIS OF DENTITION, Guaita (*Gaz. de l'Hôpital*, No. 4, etc., 1883).—The writer describes cases closely resembling tubercular meningitis in almost all respects, except in the fact that recovery commenced as soon as a tooth was cut. In others death resulted, and in all such cases he recommends energetic anti-phlogistic treatment, calomel, etc. He would regard many of the fatal results attributed to meningitis as being due to this affection.

INVAGINATION OF THE INTESTINE IN CHILDREN, Archambault (*Gaz. des Hôpitaux*, 1882, No. 111).—The frequency of this affection in children under four years of age the writer points out as being due to the great laxity of the mesentery. In children the symptomatology differs somewhat from that in adults. Thus stools passed consist usually of mucus and blood, and vomiting, when it occurs, is rarely fecal. In the early stages there is no fever, but extreme pain, amounting often to excessive agony; great collapse, with cold extremities, and feebleness or absence of pulse; then a pause, and a renewal of the same symptoms, and ultimately the accession of inflammatory symptoms. As a favourable issue is not to be looked for in the natural course of events, active treatment should be resorted to as soon as a diagnosis is made. Purgatives increase the invagination, and local blood-letting is, the writer states, useless, as the inflammatory stage is only of late occurrence. Reliance is to be placed on remedies which will stay peristaltic action, *i.e.*, narcotics pushed to the extent of narcosis. Then recourse must be had to mechanical treatment—the injection of air into the bowel through a tube which completely distends the anal opening, or the use of carbonic acid gas generated by the introduction of Sedlitz powders and water, or by attaching a tube to a soda-water syphon, and thus throwing the contents into the bowel, in either case taking care to “hermetically” close the anus. The writer condemns the use of enemata, or of a sponge on the end of a rectal bougie, as likely to cause injury to the bowel. As a last resource he mentions abdominal section, which, however, he states, almost always ends in death with children.

THE SYPHILITIC ORIGIN OF RICKETS, Magitot (*Gaz. des Hôpitaux*, 10th May 1883).—In discussing this question, the writer reviews the question of peg-teeth as distinctive of hereditary syphilis, and he comes to the conclusion, as a result of numerous and careful observations, that this tooth-formation, as described by



Hutchinson and Parrot, is not characteristic of syphilis; that undoubtedly hereditary syphilis affects the teeth, but that other causes may produce, in greater or less degree, the same results, and notably among these are infantile diseases attended with disturbance of nutrition and of the nervous system, especially eclampsia infantum.

THE SYMPTOMS AND DIAGNOSIS OF MALARIA IN CHILDREN, Holt (*Amer. Jour. of Obst. and Dis. of Children*, Nos. 1-4, 1883).—From a study of 184 cases observed by himself in a particularly malarious district of New York city, the writer draws the following conclusions:—1st, Malaria in early life presents symptoms peculiar to that period, and differs from the same disease in adults as widely as does pneumonia. 2nd, The classification of the cases as remittent or intermittent, and the division into hot, cold, and sweating stages, as in adults, leads to misapprehensions regarding the course of the disease, and confusion in diagnosis. 3rd, In any acute febrile disease presenting an unusual course, the spleen should always be examined, especially in a district as malarial as New York. 4th, In obstinate cases of diarrhoea or bronchitis not affected by ordinary remedies, especially if these symptoms show a tendency to periodicity, malaria should always be investigated as a possible cause. 5th, Spells of drowsiness and frequent attacks of epigastric pains should always excite suspicion. 6th, In children it is even more necessary than in adults carefully to interrogate every organ before making a diagnosis where the symptoms are at all obscure.

#### CASES.

“Hæmophilia—Fatal Hæmorrhage following Ritual Circumcision,” *Centb. f. Klin. Med.*, No. 19, 1883.

“Single Tubercle in the Pons in Tubercular Meningitis,” *Archiv f. Khkunde.*, Bd. iv. 2-4.

“Two Cases of Spinal Paralysis in Children,” *Ibid.*

“Case of Morbus Basedowii,” *Ibid.*

“Hydrencephalocele of the Entire Cerebellum,” Maurer, *Ibid.*, 7 and 8.

“Purulent Periostitis and Osteomyelitis of both Tibiæ; Amputation; Recovery,” *Ibid.*

“Intussusception in a Nine-Month Old Child,” Gillette, *Ibid.*, 7 and 8.

“Omphalitis with Extensive Diphtheritic Affections,” Hertzka, *Ibid.*, 3 and 4.

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## Part Fourth.

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### MEDICAL NEWS.

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ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held on 12th October 1883, and were admitted L.R.C.P. Ed.



and L. R. C. S. Ed.—John Williams, Liverpool; Asutosh Mitra, Edinburgh; Thomas Evans Franklin, Edinburgh; Robert Martin Fleming, Ipswich, Suffolk; John Charles Harris, Plymouth; George James Waters Garnham, Derby; Alfred Bourne, Darlington; Benjamin Marshall, Tyrone; Edmond Walsh, Cork; John Francis Ryan, Loughrea, Co. Galway; Evans Jones, New Quay, Wales; George Brown, Newport, Co. Tipperary; John Albert Maddox, Edinburgh; Richard Basil Morley, Jersey; John H. Cropper, Blackpool; Edmund Kemp Bourne, Kidderminster; Robert Ambrose, London; William Francis Miller, Hastings; Thomas Joseph Patrick Hartigan, Templemore, Ireland; John Mullin, Oranmore, Co. Galway; Ralph Bennett Sidebottom, Manchester; Ernest William Haydon, Wimborne, Dorset; James E. Sinclair, Edinburgh; James Malcolm M'Kee, Belfast; Arthur John Clayton, Leeds; James Hogg, Glasgow; Mudalitamby Eleyatamby, Edinburgh; John William Pedroza, Edinburgh.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 18th October, 1883, and were admitted L. R. C. P. Ed.:—Robert Hope Alston Hunter, Battersea, London; Herbert John Robson, Leeds; Frank Duckinfield Astley, Canada; Robert Caldwell, Tavistock, S. Devon; George Childs Macdonald, London; Charles Arblaster, Birmingham.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Surgery on 19th October 1883, and were admitted L. R. C. S.—William Arthur Shufelt, Edinburgh; Edwin Charles Warren, New Brompton, Kent; Thomas Decimus Richards, Cornwall; Harry Graham Smith, Edinburgh; Donald MacGregor, Inverness.

MESSRS GREENWOOD & Co.'s IMPROVED CLINICAL THERMOMETER possesses all the requisites for a useful instrument. It is light, handy, not too long, easily read, well fitted in a light and seemly case, and has one great recommendation to the members of a poor and ill-paid profession, that it is very cheap. The one we are using at present has never been out of order, and has lasted much longer than such brittle articles generally do.

SYRUPUS FERRI ET QUINIAE HYDROBROMAS, AND SYRUPUS FERRI ET QUINIAE ET STRYCHNIAE HYDROBROMAS, manufactured by Fletcher, Fletcher, & Stevenson, London.—We have been favoured with samples of these two preparations, and have much pleasure in recommending them to the notice of the profession. They are excellent preparations of most useful medicines, and will be extensively used.

PYÆMIA EXTENDING OVER SIX MONTHS, WITH RECOVERY.—Under the above heading, the *Philadelphia Medical Times* publishes a remarkable case where septic infection of the system followed a bruise of the index finger of the right hand in a lad aged 17. Numerous abscesses occurred in the hand and arm of the same side. The patient had also double orchitis, pneumonia, enlargement of the liver with jaundice, dysentery, nephritis with pus in the urine, abscess of the prostate with urinary fistula supervening, disorganization of second finger of hand for which amputation was performed, abscess over scapula opening into the axilla with copious secondary hæmorrhage, which was arrested by stuffing the cavity with seven yards of antiseptic muslin. The patient recovered after all this, and was presented to the Philadelphia County Medical Society "as a sound, healthy young man, although he bears on his person twenty-three scars of the surgeon's knife."

The treatment adopted was free incision and drainage, while internally, "opium, quinine, sulphide of calcium, eucalyptol, salicylic and carbolic acids, iron, milk, beef-tea, and four ounces of alcohol diluted, were given daily for weeks together."

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## OBITUARY.

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### SURGEON P. MACPHERSON GRANT

M.B., C.M. EDIN.; B.Sc. EDIN.

THIS deserving young officer, at the age of thirty-four, has fallen one of the first victims to the recent outbreak of cholera in India. In the district of Western Malwah, where Dr Grant was stationed as medical officer to the First Central India Horse, the disease had made its appearance by the beginning of July, at which time there seemed to be little indication of the outbreak assuming a serious form. On the 16th of that month he was called on to attend a case occurring in the regiment, while he himself was suffering from the effects of an attack of malarial dysentery, and on the following day he experienced some of the premonitory symptoms of cholera. These symptoms for a while passed off, but recurred with renewed violence on the morning of the 18th, and the disease ran its course to a fatal termination, which took place early on the morning of the 22nd. Dr Grant had been in the Indian Medical Service since 1877, and during his short career had earned for himself in a high degree the respect and affection of his fellow-officers and the men of the various regiments to which he had been attached, as much on account of the untiring attention he bestowed on those under his care, whether native or European, as on account of his professional skill and attainments. He received his education at the University of Edinburgh, in which city, after taking the degrees of M.B. and C.M. in 1870, he held various hospital appointments. He afterwards spent some time in Berlin and Vienna in order to perfect his knowledge of the diseases of the larynx, with the view of devoting himself specially to that department of medical science. He was, however, subsequently induced to turn his attention to the public service, and accordingly entered himself for the Indian medical competitive examination in 1876, when he passed fifth on the list. On leaving Netley he gained one place in the final examination, and now stood fourth, being at the same time first in the department of hygiene. Before leaving for India he took the B.Sc. degree at Edinburgh in 1877. His first station was at Mian Mir, and towards the end of 1877 he accompanied the troops against the Jowaki-Afridis, where he served with distinction. On the cessation of hostilities he took duty on the Cashmere frontier, among the fugitives from the famine at that time existing in the Cashmere valley, and while engaged on this service he contracted typhus fever, to which he nearly succumbed. On his



recovery he was attached to the Central India Horse, and in 1880, during the war in Afghanistan, served for some time on General Roberts's staff, and afterwards received the respective medals for this and for the Jowaki campaign. During his career in the service Surgeon Grant established a reputation with his superior officers, both in the medical and military departments, for abilities of a high order, and for a thorough devotedness to every call of duty. He had the happiness of gaining the esteem and affection of those with whom he was brought in contact, for his genuine goodness of heart and never-failing considerate attention to all.

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### ROBERT MOFFAT, M.D., L.R.C.S.E.

It is with great regret that we record the death of Robert Moffat, M.D., L.R.C.S.E., of Falkirk, at Bridge-of-Allan, on the 5th ult.

The early weeks of May saw him struggling to throw aside a severe cold he had caught in pursuit of his profession, and by the end of the month his frame was so shaken by what turned out to be congestion of the lungs, that he had to confine himself to his sick-chamber and seek the best medical advice. The hard winter's work just ended had so prostrated him that it was clear to his friends that if he ever recovered he would never be able to undertake the same arduous duties again. He rallied somewhat as the summer advanced, and his removal to the Bridge-of-Allan in the early part of September strengthened the hope that he might yet be able to winter in the Riviera and return to his practice in the following summer. Complications of a serious and unexplainable nature, however, appeared in connexion with his stomach and other organs, which entirely baffled medical skill, and he gradually became weaker and weaker until his death.

Born at Newbigging, Musselburgh, in 1831, he graduated at Edinburgh University M.D. in 1856, and became L.R.C.S.E. in the following year. His first practice was at Kettle, in Fifeshire. He removed in 1860 to Polmont, Stirlingshire, where he succeeded Dr Myrtle, who had gone to Harrogate. Some years afterwards he annexed the practice of Dr Girdwood in Falkirk to his Polmont one, and took up his residence in the latter town. From the first his practice widened, and it may be safely said that no country practitioner in Scotland had a more extended circuit or a more lucrative practice to attend to.

Dying a comparatively young man, still he has left a name which will not be easily forgotten in East Stirlingshire, where he spent most of his life.

A gifted medical man in many respects, to a skilled knowledge of his profession he added a keen insight into human nature. With an excellent presence and a genial manner, he easily won the friendship of his patients, and many of them mourn the loss of their warmest friend. Kind to a fault, and generous in all circum-



stances, patients trusted and felt confidence in him the moment they saw him. As the end of his profession he kept the noblest and loftiest aims in view, and no patient ever asked for advice, however inconvenient, who did not get it ungrudgingly, and with it that word of mercy, charity, or kindness which soothes the bitterest cup or helps to gladden the hopeless heart.

A staunch Conservative, always to the front in election matters; once an elder in the Established Church, he resigned when he felt he could not give sufficient time to the conscientious discharge of the duties of the office.

He was twice married, and leaves a widow and four children to mourn his untimely end.

### PUBLICATIONS RECEIVED.

- JOHN ASHHURST, jun., M.D.,—The International Encyclopædia of Surgery. Macmillan & Co., Lond., 1883.
- Atlas of Pathology. Fasc. V. New Sydenham Society, 1883.
- FANCOURT BARNES, M.D.,—A Manual of Midwifery for Midwives. Smith, Elder, & Co., Lond., 1883.
- HENRY BEASLEY,—The Book of Prescriptions. J. & A. Churchill, Lond., 1883.
- JOSEPH BELL, F.R.C.S. Ed.,—A Manual of the Operations of Surgery. 5th Edition. MacLachlan & Stewart, Edin., 1883.
- LÉON BLANC, M.D.,—The Mineral Waters of Aix-les-Bains and Marlioz. J. & A. Churchill, Lond., 1883.
- BOURNEVILLE et BRICON,—Manuel des Injections Sous-cutanées. Librairie du Progrès Médical, Paris, 1883.
- Dr BOURNEVILLE,—L'Année Médicale. E. Plon et Cie, Paris, 1883.
- B. BRADSHAW's Dictionary of Mineral Waters, Climatic Health Resorts, Sea Baths, and Hydropathic Establishments. Trübner & Co., Lond., 1883.
- W. & J. BRAITHWAITE's Retrospect of Medicine. Vol. 87. Simpkin, Marshall, & Co., Lond., 1883.
- G. H. BRANDT, M.D.,—Royat in Auvergne: its Mineral Waters and Climate. H. K. Lewis, Lond., 1883.
- G. H. BRANDT, M.D.,—Hamмам Rirha, Algiers: A Winter Health Resort. H. K. Lewis, Lond., 1883.
- BERNARD E. BRODHURST,—On Curvatures and Disease of the Spine. J. & A. Churchill, Lond., 1883.
- W. S. BROWN, M.D.,—A Clinical Handbook on the Diseases of Women. Wm. Wood & Co., New York, 1882.
- T. LAUDER BRUNTON, M.D., etc.,—Tables of Materia Medica. Macmillan & Co., Lond., 1883.
- Prof. J. M. CHARCOT,—Lectures on the Localization of Cerebral and Spinal Diseases. New Sydenham Society, Lond., 1883.
- JOSEPH COATS, M.D.,—A Manual of Pathology. Longmans, Green, & Co., Lond., 1883.
- Dr DEBOUT D'ESTRÉES,—Medical Guide to Contrexéville. J. & A. Churchill, Lond., 1883.
- Descriptive Catalogue of the Pathological Museum of University College, Liverpool.
- GEO. J. ENGELMANN, A.M., M.D.,—Labor among Primitive Peoples. J. H. Chambers & Co., St Louis, 1883.
- ROBERT FARQUHARSON, M.P., M.D., etc.,—A Guide to Therapeutics. Smith, Elder, & Co., Lond., 1883.
- G. E. FENWICK, M.D., C.M.,—Excision of the Knee Joint. Dawson Brothers, Montreal, 1883.
- R. T. FREEMAN, L.R.C.P.,—A Few Words upon Anæsthetics. J. & A. Churchill, Lond., 1883.
- SAMPSON GAMGEE, F.R.S.E.,—On the Treatment of Wounds and Fractures. J. & A. Churchill, Lond., 1883.
- HENEAGE GIBBES, M.D.,—Practical Histology and Pathology. H. K. Lewis, Lond., 1883.
- Guy's Hospital Reports. Vol. 41. J. & A. Churchill, Lond., 1883.
- WILLIAM A. HAMMOND, M.D.,—A Treatise on Insanity in its Medical Relations. H. K. Lewis, Lond., 1883.
- REGINALD HARRISON, F.R.C.S.,—Observations on Lithotomy, Lithotrixy, etc. J. & A. Churchill, Lond., 1883.
- ARTHUR HILL HASSALL, M.D. Lond.,—San Remo. Longmans, Green, & Co., Lond., 1883.
- Dr W. H. VAN DER HEIJDEN,—Préservation de la Syphilis par la Vaccine, etc. J. L. Beijers, Utrecht, 1883.
- T. HOLMES, M.A., and J. W. HULKE, F.R.S.,—A System of Surgery. 3 Vols. Longmans, Green, & Co., Lond., 1883.
- Illustrated Medicine and Surgery. Vol. II., Nos. 2, 3. E. B. Treat, New York, 1883.
- CHARLES MOORE JESSOP, M.R.C.P.,—Asiatic Cholera: being a Report of an Outbreak of Epidemic Cholera in 1876, at a Camp near Murree in India. H. K. Lewis, Lond., 1883.
- Dr M. JOUSSET,—Essai sur les Hématocèles Uterines Intra-Péritonéales. J. B. Baillière et Fils, Paris, 1883.

- Kallos: A Treatise on the Scientific Culture of Personal Beauty and the Cure of Ugliness. Simpkin, Marshall, & Co., Lond., 1883.
- E. KLEIN, M.D., F.R.S.,—Elements of Histology. Cassell & Company, Lond., 1883.
- Dr L. LEWIN,—The Untoward Effects of Drugs. George S. Davis, Detroit, 1883.
- Surgeon-General T. LONGMORE, C.B.,—Sanitary Contrasts of the British and French Armies during the Crimean War. Chas. Griffin & Co., Lond., 1883.
- LOUISA LOWE,—The Bastilles of England; or, the Lunacy Laws at Work. Crookenden & Co., Lond., 1883.
- EDWARD LUND, F.R.C.S.,—The Present Aspect of the Antiseptic Question. J. E. Cornish, Manchester, 1883.
- M. D. MAKUNA,—Transactions of the Vaccination Inquiry. Part I. W. H. Lead, Leicester, 1883.
- PATRICK MANSON, M.D.,—The Filaria Sanguinis Hominis. H. K. Lewis, Lond., 1883.
- WM. MARTINDALE, F.C.S.,—The Extra Pharmacopœia of Unofficial Drugs. H. K. Lewis, Lond., 1883.
- Medical Communications of the Massachusetts Medical Society. Vol. XIII. No 2. Boston, 1883.
- F. J. MOUTAT, M.D., and H. SAXON SNELL,—Hospital Construction and Management. Part I. J. & A. Churchill, Lond., 1883.
- New Sydenham Society's Lexicon. Part VIII.
- F. OPPERT, M.D.,—Hospitals, Infirmaries, and Dispensaries. J. & A. Churchill, Lond., 1883.
- ISAMBARD OWEN, M.D.,—Materia Medica. J. & A. Churchill, Lond., 1883.
- RUSHTON PARKER, B.S., F.R.C.S.,—Abdominal Hernia. Adam Halden, Liverpool, 1883.
- JOHN PARKIN, M.D.,—Phthisis: its Cause, Nature, and Treatment. David Bogue, Lond., 1883.
- JOSEPH PARRISH, M.D.,—Alcoholic Inebriety. P. Blakiston, Son, & Co., Philadelphia, 1883.
- AUGUSTUS J. PEPPER, M.S., etc.,—Elements of Surgical Pathology. Cassell & Co., Lond., 1883.
- Pharmacopœia of the North-Eastern Hospital for Children. J. & A. Churchill, Lond., 1883.
- LEWIS S. PILCHER, A.M., M.D.,—The Treatment of Wounds. Wm. Wood & Co., New York, 1883.
- BARNARD S. PROCTOR,—Lectures on Practical Pharmacy. J. & A. Churchill, Lond., 1883.
- CHARLES HENRY RALFE,—Clinical Chemistry. Cassell & Co., Lond., 1883.
- AMBROSE L. RANNEY, A.M.,—The Topographical Relations of the Female Pelvic Organs. Wm. Wood & Co., New York, 1883.
- H. ARMSTRONG RAWLINS, M.R.C.S., etc.,—On the Cause and Treatment of Phthisis. Cassell & Co., Lond.
- B. WARD RICHARDSON, M.D., etc.,—The Field of Disease: a Book of Preventive Medicine. Macmillan & Co., Lond., 1883.
- SYDNEY RINGER, M.D.,—A Handbook of Therapeutics. H. K. Lewis, Lond., 1883.
- FRED. T. ROBERTS, M.D., etc.,—A Handbook of the Theory and Practice of Medicine. H. K. Lewis, Lond., 1883.
- JAMES ROES, M.D., LL.D.,—The Diseases of the Nervous System. 2 Vols. J. & A. Churchill, Lond., 1883.
- JAMES B. RUSSELL, B.A., M.D.,—Memorandum on the Hospital Accommodation for Infectious Diseases in Glasgow. Glasgow, 1883.
- Dr L. A. DE SAINT-GERMAIN,—Chirurgie Orthopédique. J. B. Baillière et Fils, Paris, 1883.
- A. ERNEST SANSON, M.D.,—The Lettsomian Lectures on the Treatment of some of the Forms of Valvular Disease of the Heart. J. & A. Churchill, Lond., 1883.
- ERIC E. SATTLEE, M.D.,—A History of Tuberculosis. Robert Clarke & Co., Cincinnati.
- LEWIS A. SAYER, M.D.,—Lectures on Orthopædic Surgery and Diseases of the Joints. J. & A. Churchill, Lond., 1883.
- ARMAND SEMPLE,—The Mother's Guide to the Management and Feeding of Infants. Henry Kimpton, Lond., 1883.
- SIMEON SNELL,—The Electro-magnet and its Employment in Ophthalmic Surgery. J. & A. Churchill, Lond., 1883.
- GEORGE B. STARKWEATHER, F.R.G.S.,—The Law of Sex. J. & A. Churchill, Lond., 1883.
- The Chinese Opium Smoker. S. W. Partridge & Co., Lond., 1883.
- The Medical and Surgical History of the War of the Rebellion. Part 3, Vol. II. Washington, 1883.
- Transactions of the College of Physicians of Philadelphia. Vol. VI.
- Transactions of the Medical and Chirurgical Faculty of the State of Maryland, Sess. 85.
- Transactions of the Medical Society in Ireland. Vol. I. Fannin & Co., Dublin, 1883.
- Transactions of the Medical Society of the State of Pennsylvania. Vol. XV. Philadelphia, 1883.
- FRED. TREVEE, F.R.C.S.,—Surgical Applied Anatomy. Cassell & Co., Lond., 1883.
- Twenty-Fifth Annual Report of the General Board of Commissioners in Lunacy for Scotland.
- Twenty-Fifth Annual Report of the Registrar-General of Births, Deaths, and Marriages in Scotland.
- JAMES TYSON, M.D.,—A Guide to the Practical Examination of Urine. P. Blakiston, Son, & Co., Philadelphia, 1883.
- United States Dispensatory. Philadelphia, J. B. Lippincott & Co., 1883.
- A. VINTRAS, M.D.,—Medical Guide to the Mineral Waters of France. J. & A. Churchill, Lond., 1883.
- F. H. WELCH, F.R.C.S.,—Enteric Fever. H. K. Lewis, Lond., 1883.



JOHN WILLIAMS, M.D., F.R.C.P.,—On the Natural History of Dysmenorrhœa. London, 1883.

SAMUEL WILKS, M.D., F.R.S.,—Lectures on Diseases of the Nervous System. J. & A. Churchill, Lond., 1883.

EDWARD WOAKES, M.D.,—The Hygienic Management of the Catarrhally Pre-disposed. H. K. Lewis, Lond., 1883.

G. SIMS WOODHEAD, M.D., F.R.C.P.E.,—Practical Pathology. Young J. Pentland, Edin., 1883.

### PERIODICALS RECEIVED.

Alienist and Neurologist,—April-July.  
American Journal of the Medical Sciences,—April, May.

American Journal of Neurology and Psychiatry,—Feb.-Aug.

American Journal of Obstetrics,—Mar.-Oct.

American Journal of Physiology,—Feb.

American Practitioner,—Feb.-Aug.

Analyst,—Mar.-Oct.

Annales d'Oculistique,—Jan.-Aug.

Annals of Anatomy and Surgery,—Mar.-Oct.

Archives Générales de Médecine,—Mar.-Oct.

Archives de Tocologie,—Mar.-Sept.

Archives of Medicine,—April.

Australasian Medical Gazette,—Jan.-Aug.

Australian Medical Journal,—Aug.-April.

Berliner Klin. Wochenschrift,—Feb. 26-Oct. 15.

Birmingham Medical Review,—Mar.-Oct.

Births, Deaths, and Marriages, Monthly Return of,—Feb.-Sept. Quarterly Return.—March-June.

Boston Medical and Surgical Journal,—Feb. 15-Oct. 4.

Brain,—April, July.

Bristol Medico-Chirurgical Journal,—July.

British Medical Journal,—March 3-Oct. 27.

Bulletin Général de Thérapeutique,—Feb. 28-Oct. 15.

Centralblatt für Chirurgie,—Feb. 24-Oct. 20.

Centralblatt für die Gesammte Therapie,—March.

Centralblatt für Gynäkologie,—Feb. 24-Oct. 20.

Chicago Journal,—Jan.-Oct.

Detroit Lancet,—Feb.-Oct.

Dublin Journal of Medical Science,—March-Sept.

El Repertorio Medico,—July.

English Illustrated Magazine,—Oct.

Ephemeris of Materia Medica, Pharmacy, etc.,—March-Sept.

Fort Wayne Journal of the Medical Sciences,—April.

France Médicale,—Feb. 22-Oct. 20.

Gazzetta Medica di Torino,—Feb. 25-Oct. 5.

Gazzetta Medica Italiana,—July 28.

Gazette des Hôpitaux,—Feb. 20-Oct. 20.

Gazette Médicale de Paris,—Feb. 24-Oct. 20.

Glasgow Medical Journal,—Mar.-Oct.

Health,—Oct. 19.

Indian Medical Gazette,—Feb.-Sept.

Journal de Médecine de Bordeaux,—Feb. 25-Oct. 14.

Journal de Saxon, Nos. 1-4.

Journal de Thérapeutique,—Feb. 25-Oct. 10.

Journal of Anatomy and Physiology,—April-Oct.

Journal of Cutaneous and Venereal Diseases,—Mar.-Oct.

Journal of Mental Science,—April-Oct.

Journal of Nervous and Mental Disease,—Jan.-July.

Journal of the British Dental Association,—March-Oct.

Kings, Proceedings of Medical Society of the County of,—March-Oct.

Klinische Monatsblätter für Augenheilkunde,—April-Oct.

Liverpool Medico-Chirurgical Journal,—July.

London Medical Record,—March-Oct.

Medicinisch-Chirurgisches Correspondenz-Blatt,—June-Sept.

Medical Press and Circular,—Feb. 28-Oct. 17.

Medical Register,—March-May.

Medical Times and Gazette,—Feb. 24-Oct. 20.

Medical Tribune,—Feb.-Sept.

Medico-Legal Journal,—June-Sept.

Messenger of Health,—June-Aug.

Midland Medical Miscellany,—Feb.-April.

New Remedies,—March-Sept.

New York Medical Journal,—Feb. 24-Oct. 6.

New York Medical Record,—Feb. 10-Oct. 6.

Nordiskt Medicinskt Arkiv,—Band xv. Nos. 1-7.

Philadelphia Medical and Surgical Reporter,—Feb. 3-Sept. 29.

Philadelphia Medical Bulletin,—Aug.

Philadelphia Medical News,—Feb. 10-Oct. 6.

Philadelphia Medical Times,—Feb. 10-Oct. 6.

Physician and Surgeon,—Feb.-Sept.

Polyclinie,—July-Sept.

Practitioner,—March-Oct.

Progrès Médical,—Feb. 24-Oct. 20.

Quarterly Therapeutic Review,—July.

Recueil d'Ophthalmologie,—Feb.-Aug.

Revue de Chirurgie,—March-Oct.

Revue de Thérapeutique Médico-Chirurgicale,—Mar. 1-Oct. 15.

Revue Médicale,—April 21-Oct. 20.

Revue Mensuelle de Laryngologie, etc.,—Mar.-April.

Revue Mensuelle des Maladies de l'Enfance,—April.

San Francisco Western Lancet,—Jan.-Aug.

Sanitary Record,—March-Oct.

St Louis Courier of Medicine,—Mar.-Oct.

Texas Medical and Surgical Record,—Mar., May.

Therapeutic Gazette,—Jan.-Sept.

Virchow's Archiv,—Feb.-Sept.

Weekblad van het Nederlandsch Tijdschrift voor Geneeskunde,—Feb. 24-Sept. 29.

Western Medical Reporter,—Feb.-Sept.



## Part First.

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### ORIGINAL COMMUNICATIONS.

#### I.—VALEDICTORY ADDRESS TO THE EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

By the retiring President, GEORGE W. BALFOUR, M.D., Pres. R.C.P.E., Consulting Physician to the Royal Infirmary and to the Royal Hospital for Sick Children, Edinburgh.

(Delivered 7th November 1883.)

FOR as far back as we have any records of the proceedings of this Society, it has been customary for the retiring President to give a general *résumé* of the work done in the Society during his two years' occupancy of the chair. In a society like the present, which has always comprised among its members some of the most advanced thinkers and most able teachers of medical science, this biennial retrospect has had this manifest advantage, that from one fixed period to another it indicated the lines in which medical thought was progressing, as well as the nature and extent of the progress made. This time-honoured custom has not, however, been always adhered to. It has been varied from time to time by original essays of great value, one of the earliest of these being by Dr John Gairdner "On the Importance of Medical Statistics," another by Dr Sellar "On Medicine as an Art, and the Nature of its Scientific Basis," and a third by Sir James Simpson "On the General Progress of Medicine." At the present time it seems less needful than usual to summarize the work of the two sessions during which I have had the honour to preside over you, inasmuch as the Society has now returned to its original practice of publishing its Transactions, and each of you possesses, in two handsome volumes, the complete record of all the work that has been brought before us during these two sessions, as well as of the discussions to which that work has given rise. I have therefore thought that it might be more interesting to you, and probably quite as instructive, if I were to give you an account of the progress made, not during the last two sessions only, but during all the period with which I have been connected with the Society. But as the progress in medical science during that period has been so great, that it would be impossible to review the whole of it in the limited time at my

disposal, I shall restrict myself to one or two subjects only, pointing out the influence of this Society in developing the opinions presently held regarding them, and their important bearing on the evolution of medical science, as well as on the wellbeing of mankind.

The first subject I shall take up is OVARIOTOMY, an operation which has attained a great success in our day, but one which was for the first time discussed in this Society just a year before I joined it. You are aware that the removal of the healthy ovaries from the females of the lower animals, to prevent breeding and secure an early maturity for the purposes of the butcher, has been an operation carried out from time immemorial with but little danger to life. Some of the nations in olden times, notably the Arabians and Lydians, were also in the habit of making what were called female eunuchs. But the removal of diseased ovaries for the purpose of relieving suffering and prolonging life is altogether an operation of modern development. It is little more than one hundred years since L'Aumonier,<sup>1</sup> the chief surgeon of the great hospital at Rouen, removed a diseased ovary for the first time, I believe, in medical history. Single cases, more or less successful, followed from time to time in France, Germany, and America. But little progress was made, however, till Dr Macdowal of Kentucky recorded three successful cases, the first of which occurred in 1809, and the last in 1816. In 1823 the first operation of this kind in Edinburgh was performed by the late Mr John Lizars. And in this remarkable case the whole of the profession in Edinburgh were satisfied that one ovary was diseased, while all but Dr Campbell and Mr Lizars were agreed that the operation was unjustifiable. Nevertheless, when the operation was completed, both ovaries were found to be perfectly healthy, and the woman made an excellent recovery. Surely a most remarkable instance of the fallibility of medical opinion. Encouraged by this qualified success, Mr Lizars subsequently operated upon three other patients, of whom one died, while in the other two the operation was not completed. In one of these both ovaries were diseased, and only one could be removed; in the other the diseased ovary could not be removed on account of its extensive adhesions.<sup>2</sup> From this time onward ovariectomy continued to be occasionally performed, but with so little success, both as regards the accurate diagnosis of the case and the ultimate result to the patient, that the late Dr Lee of London has stated that "on the practice of extirpating the ovaria when diseased, it is not necessary to offer any observations, as it has been abandoned by all who have made themselves acquainted with the pathology of these organs."<sup>3</sup> This statement was made in 1834, and so late as January 1844, just two months

<sup>1</sup> *Observations on the Extraction of Diseased Ovaria*, by John Lizars, Surgeon, Edinburgh, 1825, p. 3.

<sup>2</sup> *Op. cit.*

<sup>3</sup> *Cyclopædia of Practical Medicine*, vol. iii. p. 231, 1834.



before Dr Atlee of Philadelphia commenced what was to prove his most successful career as an ovariologist, a reviewer on this side of the Border gave utterance to very similar sentiments<sup>1</sup> in noticing Mr Clay's, of Manchester, first series of cases.<sup>2</sup> Shortly after this ovariectomy was for the first time brought under the consideration of this Society by the late Professor Bennett, who read a paper entitled "Observations on Ovarian Dropsy."<sup>3</sup> Only a very imperfect abstract of this paper has been published, but it apparently contained an original account of the pathology of ovarian cysts, a claim that the diagnosis might be greatly facilitated by a microscopic examination of the fluid removed by tapping, and by the use of Sir James, then Dr, Simpson's uterine sound; it also contained a full report of a case in which, at the author's request, the late Dr Handyside had performed ovariectomy, the patient dying on the 70th day. This paper was considered so important that, at Dr Cormack's request, a special night was set aside for its discussion, which is also fully reported in the journal he at that time edited.<sup>4</sup> In commencing the discussion, which I need not detail in full, Sir John Rose, then only Dr Cormack, stated that up to May 1845, 89 cases of ovariectomy had been recorded, in 14 of which the operation had been abandoned after the woman was opened, either because there was no tumour or because its attachments could not be meddled with. And Dr C. claimed that all the great surgeons of the day rightly denounced ovariectomy as—"An operation in almost every case unwarrantable—1, because of almost insuperable difficulties attending the diagnosis; 2, because ovarian tumours are not fatal; 3, because of the immense and inevitable dangers of the reparative process."<sup>5</sup> Dr Handyside defended the operation, contending that, though generally inadmissible, "yet in such rare cases as the present, *but in such only*, he was quite prepared to repeat the operation."<sup>6</sup> Dr Handyside, as some of you may remember, was always willing to adopt anything that looked like a rational improvement in surgery, and was one of the earliest to intrust the vessels in an amputation through the thigh to acupressure.<sup>7</sup> Sir James Simpson followed him with one of his ablest and raciest speeches, which even yet it is a treat to read. He acknowledged that ovariectomy was a most difficult and dangerous operation, but he regarded it as not only justifiable, but urgently required in certain cases for which medicine had neither remedy nor relief. He looked forward confidently to the time when this operation would be recognised as a legitimate operation, when, by improvements in the method of diagnosis, fitting cases would be more readily selected, and, by improvements in the

<sup>1</sup> *Monthly Medical Journal*, 1844, p. 67.

<sup>2</sup> *Cases of Peritoneal Section for the Extirpation of Diseased Ovaria*, by Henry Clay, M.R.C.P.E., London, 1842.

<sup>3</sup> *Monthly Medical Journal*, Jan. 1846, p. 53.

<sup>4</sup> *Loc. cit.*

<sup>5</sup> *Loc. cit.*, p. 54.

<sup>6</sup> *Loc. cit.*, p. 56.

<sup>7</sup> *Edinburgh Medical Journal*, Dec. 1860, p. 504.



methods of operating, the mortality would be greatly lessened, as had already happened in other fields of surgery. "How different," he says, "is amputation now from what it was formerly, with the hot iron, or boiling pitch, to seal up the cut vessels. How comparatively safe and simple is the tying of an artery now from what it was half a century ago, with its flat double ligatures, and ligatures of reserve, etc." He further twitted the surgeons with denouncing ovariectomy as unjustifiable, mainly because, though they operated, they were unable to diagnosticate the tumours, and required an obstetrician to aid them; while the foremost surgical authorities still regarded ligature of the innominate as a justifiable operation, though it had proved fatal in every case, instead of only in one out of every two or three, like ovariectomy. He further supported his position by an appeal to the statistics of the major operations as performed in Paris, Glasgow, and Edinburgh; concluding his most eloquent speech by some novel suggestions as to the performance of the operation, notably one first made to himself by Dr George Keith, to pass the pedicle out into the vagina, thus both providing free drainage as well as enabling the abdominal wound to be more securely closed. This is noteworthy as the first connexion of the family name of Keith with an operation which was destined ere long to make it so famous. I need not say that Sir James's charming way of making things rather hot for his opponents, in this case the surgeons, brought a hornets' nest about his ears, in the shape of recriminative letters showered upon him through the journals for the next month or two. But Sir James could always hold his own, and at this meeting of the Society he certainly had the best of it. Mr Spence, who had refused to operate in the case under discussion, defended his position, and denied that ligature of the innominate was a justifiable operation. But Sir James, quoting in reply from Mr Fergusson's and Mr Syme's textbooks, showed that he had right on his side, and adduced some further statistics supporting his view of the subject. The late Dr Spittal, speaking in support of the operation, pointed out statistically that errors in diagnosis had been even more frequently made in connexion with aneurisms than with ovarian tumours, and he regarded ovariectomy as quite as justifiable from every point of view as ligature of the larger arteries for aneurism. But he was only Physician.

In April 1848<sup>1</sup> Sir James Simpson returned to the charge, bringing with him Mr Clay of Manchester, who had that morning performed ovariectomy for the 28th time, and who naturally spoke in favour of it, confessing, however, that it had not been successful in Edinburgh. Simpson again based his support of ovariectomy upon comparative statistics, but stated that he would select his cases, and would not operate except in cases otherwise likely to prove speedily fatal. Dr Bennett, who had

<sup>1</sup> *Monthly Medical Journal*, April 1848, p. 761.

been absent from illness from the former discussion, defended the operation for pathological reasons, and said that his case had died after 70 days, not from the operation, but from ileus following a surfeit. Three years subsequently, ovariectomy is again brought before this Society by a report by Dr Myrtle of the death and dissection of Magdalene Berry, twenty-five years subsequent to Mr Lizars's unsuccessful attempt to remove her tumour, which was found very much as he had left it. Naturally enough the president, Mr Syme, took advantage of this case to urge anew the unjustifiable character of the operation of ovariectomy. Simpson, however, again came to the front in defence of this operation in certain cases.<sup>1</sup> Five years afterwards ovariectomy came before this Society on the report of an unsuccessful case operated on by Mr Edwards,<sup>2</sup> and this was a great field-night. The discussion was led off by Dr Matthews Duncan, who, in a long and able speech, contended that ovarian tumours in all cases likely to be selected for operation were not dangerous to life, "were quite consistent with a moderate, and occasionally with a long, continuance of life;" he also said that to justify this operation it had been argued that tapping was a dangerous operation, was "fatal in about one in every five cases operated on." But, as every one knew, tapping was an operation daily performed with but little risk: he himself had tapped one woman forty-six times. He disapproved entirely of the manner in which statistics had been employed to justify this operation, and he believed that, were proper statistics adduced, ovariectomy would be found "far to exceed the mortality of almost all recognised surgical operations for even the most hopeless diseases. . . . The farther we cautiously advanced in this difficult question, the more we were forced to resort to the opinions of great and wise surgeons—and they condemned the operation." Sir James Simpson again vigorously fought for the legitimacy of the operation. He pointed out that Mr Southam had published a limited table of first tapplings, in which the mortality was one in five, and he begged Dr Duncan to recollect that it was first tapplings only which were serious, and that comparatively little risk attached to the repetition of the tapping. Ovariectomy was undoubtedly a very dangerous operation, but not more so than many surgical operations for chronic disease. Amputation at the hip-joint, for instance, quite a justifiable operation in the eyes of most surgeons, was fatal in 70 out of every 100 cases; ovariectomy, an operation not justifiable in the eyes of the same surgeons, was only fatal in 40 out of every 100 cases. Dr Clay of Manchester had recently published 71 cases of ovariectomy, of whom only 22 had died, little over 30 per cent. While even in these cases the mortality

<sup>1</sup> *Monthly Medical Journal*, Feb. 1851, p. 198.

<sup>2</sup> *Edin. Medical Journal*, April 1857, p. 894. Discussion on this case will be found in the *Ed. Med. Journal*, Feb. 1857, p. 752.



had been a gradually decreasing one, 8 having died out of the first 20 = 1 in  $2\frac{1}{2}$ , 6 out of the second 20 = 1 in  $3\frac{1}{2}$ , and only 8 out of the last 31 = 1 in 4. Dr Duncan objected to ovariectomy because "surgical instinct" was against it. But surgical instinct was a misleading quality; it had formerly led the best surgeons to trepan in cases in which later experience had shown that such an operation was unnecessary. Surgical instinct had also led some of our greatest surgeons to tie the innominate for the carotid aneurism, yet of fourteen or fifteen cases all had proved fatal. The one great and powerful reason why ovariectomy had not been taken up by British surgeons, was because they were so ignorant of female diseases that they could not make a proper diagnosis without the aid of an obstetrician. Some foreign surgeons had devoted themselves to the study of female diseases, and in time this difficulty would be got over. He believed ovariectomy to be principally, if not solely, justifiable in cases where an otherwise healthy woman was threatened with speedy death from the progress of the disease, and where other treatment had either failed or seemed inadmissible for various reasons. Doubtless ovariectomy might be much more successful if undertaken at an earlier period of the disease, before the tumour had become so large or so active as to threaten life. He himself, however, doubted the propriety of undertaking this and other formidable surgical operations except for some very clamant reason. Those, however, who thought otherwise were supported in their views by those surgeons who habitually urged early operation in cases of stone, of aneurism, external tumours, etc. If the principle of early interference in such cases were admitted, it would be difficult to prove that it did not in all points and with equal force apply to ovarian cases. He could not help doubting whether in this and in some other respects the whole code of surgical ethics did not require revisal. Dr Keiller saw no reason to regard ovariectomy as an unjustifiable operation: he would have no hesitation in performing it should a suitable case come across him. Dr Moir agreed as to the danger of tapping, and stated that many patients succumbed to the first performance of this apparently trivial operation. He believed in the success of the operation in Dr Clay's hands, but did not seem to have any urgent desire to perform it himself. In answer to Dr W. T. Gairdner, it was elicited from Dr Black (late of Manchester) that Dr Clay had of late been more careful in the selection of his cases, and that his later operations had been on tumours of a smaller size. The President (the late Professor Miller) congratulated the Society on both sides being agreed that the cases suitable for the operation were most rare. "He could conceive of such cases. They demanded the following postulates:—1st, No hope from any other treatment, and death inevitable at an early period otherwise; 2nd, Reasonable expectation of success in all the circumstances; 3rd, An accurate diagnosis



as to existence of ovarian disease, as to its being more or less solid in structure, as to its non-adhesion to the parietes, and as to its being attached by a narrow peduncle ; 4th, The patient intelligently aware of the nature of her case and of the risk of the operation, and, notwithstanding, anxiously and urgently resolved on its performance. The difficulty obviously lay in the third postulate. How is such accuracy of diagnosis to be obtained ? He could conceive of such cases, but he had never met with any, and he hoped he never would ; for he was bound to confess that his instincts were all against such operations, and it was a positive relief to be assured by Dr Keiller that he would be specially exempted from all responsibility in relation to cases coming under that gentleman's care." He called it not *abdominal*, but *abominable* surgery ; and though he had no doubt that Mr Edwards had performed the operation admirably, yet he was sure that if he and Mr Edwards were spared to grow old together, the result of their combined retrospect would be to range "surgical experience" more disapprovingly of such operations than perhaps "surgical instinct" might incline to do now. Mr Edwards replied to Mr Black by reading an extract from Dr Clay's work, in which he stated that at first he was more afraid of adhesions than latterly, and that he had formerly rejected many cases on which he would not hesitate then (*Handbook of Obstetric Surgery*, 1856, p. 162). Mr Edwards also remarked that "the opinion on this or any other operation by men now eminent could not be considered final, as operative surgery was a progressive art." The magnitude of the operation should not make the surgeon overlook the smallest details, for on them mainly success depended ; and a surgeon should set about removing a tumour of forty pounds weight with as great attention to the various steps of the operation as he would employ in operating for cataract, or in making an artificial pupil. These wise and prophetic remarks conclude the first chapter in the history of ovariectomy in connexion with this operation. A new era was about to arise, a more successful operator was in preparation. On the 15th of July 1863, Dr Thomas Keith read to this Society<sup>1</sup> an account of six cases in which he had performed ovariectomy, four of whom had recovered. These were the first successful cases in Edinburgh since Mr Lizars's solitary case in 1823 ; they were not selected cases, or, if so, were selected for their severity. One of these tumours was, I suppose, the largest ever removed—it weighed 120 pounds, being heavier than the woman herself. She had previously been a patient of my own, and arrangements had at one time been made for the removal of the tumour by Sir James Simpson, but at the last moment he refused to operate. The operation was undertaken by Dr Keith a year or

<sup>1</sup> *Ed. Med. Journ.*, Oct. 1863, p. 369. Keith's paper will be found *in extenso*, *loc. cit.*, p. 299.

two subsequently. I was asked to be present, but refused, as I did not believe so large a tumour could be removed without the patient dying on the table. She herself told me that towards the close of the operation she heard one of the assistants say, "She is dead;" but she added, "I said to myself, I am not dead, and I don't mean to die if I can help it." I have reason to know that this statement is true, and that the operator, true to his character, instead of hastily closing the wound as he was urged to do, finished the operation with as much care and deliberation as if the woman were actually alive, and was rewarded by finding her to be so. She lived for nine years, and for a time was naturally an object of great professional interest. But one day a French surgeon, who had been duly informed of the immense size of the tumour and the difficulty of the operation, glanced first at the cicatrix, now contracted to a few inches and lying transversely, and then at Dr Keith so expressively, that thereafter I believe no surgeon was asked to see her. In his paper Dr Keith remarked, "There is no operation that has had so much evil spoken of it as ovariectomy. No surgical proceeding ever brought forward for the saving of life has been so unfairly treated; not one has had to pass through such an ordeal of opposition, ridicule, and unbelief, and none has come so triumphantly out of it." And again, "It is a proceeding applicable to the majority of cases of multilocular disease, and in a short time the simple rule of treatment will, I believe, be *to wait till the life of the patient is threatened by the disease*, and then, in suitable cases, to recommend the radical cure; and every successful case will be a life saved."

Mr Spence quite agreed with Dr Keith, that we should wait till life was in danger; then the operation was not only warrantable but imperative. It was scarcely fair to say that ovariectomy had been unfairly treated by surgeons; at first the diagnosis was very uncertain and the results most unsatisfactory. Nowadays the operation was on a different footing, and must be regarded as perfectly justifiable, if not performed too early. Sir James Simpson, after congratulating Dr Keith on his well-deserved success, said he did not agree with Mr Spence that ovariectomy had not been unfairly treated by surgeons. "No doubt the diagnosis had been much improved of late years; but surgeons were not justified in having opposed ovariectomy, as they had so bitterly and constantly done, on the ground that the diagnosis of ovarian disease was not perfect, for this consideration did not deter them from operating in other cases where their diagnosis was very imperfect also." It was a grave mistake to regard ovarian diseases as "unsightly rather than dangerous." When left to itself, multilocular disease of the ovary was a very fatal malady. Mr Spence and Dr Keith agreed in thinking it unjustifiable to operate unless there was danger to life. To this doctrine Simpson demurred. If we waited



till life was endangered, in many cases we would wait too long; the operation would have no chance of success. Surgeons did not generally act on this principle. When they found a stone in the bladder an immediate operation was recommended to avoid increased suffering and danger, which were sure to follow delay. Formerly it was thought ovariectomy should not be performed when there were adhesions; these are not now regarded as obstacles to the operation. Ovariectomy was now quite as successful as many of the formidable operations in surgery. Some had said that ovariectomy patients should only be operated on in the country, and never in a hospital. If this was true as to ovariectomy, it would be equally true of all surgical operations. Spencer Wells and Baker Brown had not acted on this principle, and their success was well known. Simpson concluded by remarking that one of the most important questions to be solved was the treatment of the pedicle and the mode of applying the clamp.

Dr Moir agreed as to the fatality of ovarian tumours, and alluded to the disastrous results of firstappings. Sir James Simpson had long ago pointed out the risk of first tapping. Of 130 cases of firstappings by Lee, Southam, Kivisch, and others, 30 had died before a month had elapsed. With larger data the mortality might be found to be actually less, but the operation was unquestionably often a fatal one. Dr Matthews Duncan did not think that ovariectomy had been unfairly treated by surgeons, for, as soon as success had attended the operation, its position had been established. Dr Duncan "could scarcely think that attention to minutiae could have great effect in determining the good or bad results of the operation. . . . No doubt, everything should be attended to, but it scarcely seemed to him that any little change in the mode of applying the clamp could make much difference." He did not agree with Simpson as to the danger of tapping; he had never seen any one die or suffer from this operation. Dr Keiller congratulated Dr Keith on his success; he had frequently seen him operate, and greatly admired the able manner in which difficulties had been met and overcome. There could be no doubt that in Dr Keith's hands this operation would prove yet more successful. Meanwhile his paper had accomplished much to be thankful for; it had compelled this Society to acknowledge the justifiable character of this operation.

And now I take leave of this operation; from this time onwards its history is an almost unbroken succession of triumphs, a perfect *currus triumphalis*. Four successful operations had done more to open the eyes of the profession to the legitimate character of the operation than forty years of argument. Ovariectomy had fallen into the hands of an able man, and, as Dr Keiller ventured to prophesy, his success has gone on increasing. And the success is well deserved. When a man can say that of close upon 500 cases of abdominal section he has only been wrong in his



diagnosis four times, his *tactus eruditus* must be as nearly perfect as anything sublunary can be. How carefully he had trained himself for the career to which he has so greatly devoted himself may be learned from the fact, that so lately as nineteen years ago it was argued in a series of letters in the *Lancet* (1864) that an absolutely accurate diagnosis could not be made without an exploratory incision, yet Dr Keith had operated 136 times without ever making an error in his diagnosis. This we have on the authority of Dr Peaslee of New York, himself an accomplished ovariologist, who says that Dr Keith's success—the highest in Europe—has been gained, not by a careful selection of cases, for many of them were most unpromising, but by his "great accuracy as a diagnostician, his extreme delicacy and cautiousness as an operator, and, not least, by his most conscientious and unremitting care during the after-treatment."<sup>1</sup> Dr Keith's latest publication<sup>2</sup> has proved that ovariectomy is not an operation requiring a special locality or a country atmosphere, but is one which may be successfully carried out even in the wards of an ordinary hospital. Of 79 cases operated on in the Edinburgh Infirmary, 69 ovariectomies and 10 hysterectomies, only 5 have died. Of all the cases of abdominal section, 82 in number, including the foregoing, 1 case of interstitial pregnancy, and 2 cases of removal of the ovaries and tubes, 6 have died, little over 7 per cent.; while, as if to show that this success is due to the operator himself and not to any of our modern methods, of 24 cases treated with carbolic acid spray, 4 died = 16·6 per cent., and, rightly or wrongly, some of the deaths were attributed to the carbolic acid, which, moreover, did not always prevent septicæmia; and of 2 cases treated with the boro-glyceride spray, 2 died; while of the last 56 treated without spray at all, only 1 died = 1·78 per cent. Forty years ago who could have anticipated so brilliant a success for an operation then denounced as unjustifiable—little short of murder—by every surgeon in Britain? And while we do honour to him by whom this great success has been achieved, we ought not to forget those pioneers to whom we owe much—more, perhaps, than at first we are willing to acknowledge—John Lizars, the successful operator, forced to give up the operation because the diagnosis of abdominal tumours was not far enough advanced to enable him to know whether a tumour was present or not; John Hughes Bennett, who first gave a scientific reason for operating, by showing that the pathological nature of ovarian tumours tended to ever-increasing growth till the organism succumbed, and who also first introduced the microscopic examination of the fluids as an aid to diagnosis; and, last, not least, Sir James Young Simpson, who, with his vigorous intellect and indomitable

<sup>1</sup> *Ovarian Tumours, their Pathology, Diagnosis, and Treatment, especially by Ovariectomy.* London, 1873, p. 329.

<sup>2</sup> *Report on Cases Treated in Ward XIX. of the Royal Infirmary, Edinburgh.* Edinburgh, 1883.

energy, fought the battle of ovariectomy, till he had the satisfaction of seeing it occupy the position he had always ascribed to it, of a justifiable, because a life-saving, operation, and, himself an unsuccessful operator, had the pleasure of cordially congratulating his younger rival on his unprecedented success.

The next subject of which I shall speak to you is one which has involved a change of practice among physicians even more remarkable than that we have just seen has taken place among surgeons in regard to ovariectomy. It is a change, moreover, involving much wider interests, inasmuch as it concerns every one more or less, and not merely a few women. As I myself was the first to broach the subject of this change in this Society, I do not in this case require to travel beyond my own immediate connexion with it; but in order to give you some idea of the greatness of the change, I shall first of all give you a short preliminary sketch of the state of affairs which led up to my first paper. The lancet, in those days, was in every one's hand—like Fitz-James's blade, it was both "sword and shield;" scarcely a disease which it could not cut short or ward off, according as it was employed after or before its onset. In every almanac were given the proper days and proper seasons, mainly spring and autumn, for letting blood periodically to maintain the body in health and vigour. Physicians prescribed it liberally to cure inflammations; surgeons employed it freely to ward off inflammations. An old gentleman once told me that, having been accidentally stabbed in a scuffle in Leith Street, he made his way to the door in St Andrew Square of the great Edinburgh surgeon of those days, the grandfather of our worthy late treasurer, and having rung his bell, he fell fainting on the doorstep from loss of blood. When he awoke to consciousness he found himself again bleeding, but this time from a vein opened, *secundum artem*, to prevent inflammation. The late Dr Stokes of Dublin says, "When I was a student of the old Meath Hospital, there was hardly a morning that some twenty or thirty sufferers from acute local disease were not phlebotomized. The floor was running with blood; it was dangerous to cross the prescribing hall for fear of slipping."<sup>1</sup> Even fevers did not escape. Not only were the apparently acute symptoms of relapsing fever met by bloodletting, but "the cerebral symptoms of typhus fever were met by opening the temporal artery, or by a large application of leeches to the head."<sup>2</sup> Marshall Hall, who knew better than most men the risks and dangers of bloodletting,<sup>3</sup> found it indispensable as a means of diagnosis, and bled patients to syncope to find out whether apoplectic symptoms were due to *ramollissement* or not, or whether a

<sup>1</sup> *Lectures on Fever*. London, 1874, p. 17.

<sup>2</sup> Stokes, *loc. cit.*

<sup>3</sup> *Researches Principally Relative to the Morbid and Curative Effects of Loss of Blood*. London, 1830.



patient had peritonitis.<sup>1</sup> Is it possible to conceive a state of matters more diametrically opposed to what now exists? In the midst of all this—while Marshall Hall still taught, in spite of full knowledge of its risks, that bloodletting was “the remedy—the only remedy—for inflammation;”<sup>2</sup> and Alison, that in the treatment of pneumonia, “uncomplicated and recognised from its commencement, the utmost confidence may be placed in general bloodletting, which should always be large”<sup>3</sup>—a thunderbolt fell among the profession. It was claimed by men of undeniable ability and professional skill, that the administration of a few decillionths of a grain of phosphorus was quite as efficacious in the treatment of pneumonia as the abstraction of many ounces of blood. A statement so remarkable as this could not be allowed to pass unchallenged; it was absolutely disbelieved, and there was scarcely a physician in Britain<sup>4</sup> who was not prepared to deny that patients recovering under such a treatment could have had pneumonia. It was true, nevertheless. I satisfied myself of that during a nine months’ residence in Vienna, with an almost daily visit to Fleischmann’s Hospital;<sup>5</sup> and I was perhaps only not converted to homœopathy because my equally daily visits to the General Hospital had taught me that the heroic virtues of infinitesimal doses of phosphorus were fully equalled by those of *extractum graminis*—hay tea, and that, as Skoda taught, pneumonia was not a disease tending to dissolution, but to resolution.<sup>6</sup> On my return home I was admitted a Member of this Society, and took an early opportunity of bringing before it a notice of the “Practice of Skoda,” which had proved so interesting and instructive to myself, giving an account, among other matters, of 392 cases of pneumonia treated with *extractum graminis*, or some equally innocuous remedy, with a mortality of only 54, 13·7 per cent., or nearly 1 in 7, while the mortality under more heroic treatment in the Edinburgh Infirmary, for the five years previous to September 1844, had been over 35 per cent., or nearly 1 in 2. I concluded by stating that some of the best physicians in Vienna had told me that disease had in their day undergone a gradual change in type, and was less amenable than formerly to heroic treatment; that a similar change appeared to be taking place in Britain, and that it would be wise to modify our practice in conformity with this change

<sup>1</sup> *Monthly Journal*, Sept. 1843, p. 764.

<sup>2</sup> Marshall Hall, *Researches*, etc., p. 89.

<sup>3</sup> *Outlines of Pathology*. Edinburgh, 1844, p. 280.

<sup>4</sup> The late Sir John Forbes, editor of the *British and Foreign Medical Review*, was an exception, and his paper on “Nature and Art in the Cure of Disease” was the earliest indication of the turn of the tide.

<sup>5</sup> Vide *British and Foreign Medical Review*, Oct. 1846; and *Introduction to the Study of Medicine*, Edinburgh, 1865, p. 253.

<sup>6</sup> My first impressions of Skoda’s treatment will be found in the *Northern Journal of Medicine*, 1846, p. 55.



in the constitution of disease.<sup>1</sup> The late Dr Gairdner, in reply, acknowledged that he believed in a change in the character of disease, and that acute pneumonia, for instance, formerly required much larger bloodlettings than now. He thought "nothing was better established than the good effects of bloodletting in the acute pneumonia of Edinburgh, whatever might be the case in Vienna. . . . Of the benefits of *early* bloodletting he entertained no doubt whatever; they were positive, immediate, unequivocal, and admitted by almost every physician whose experience and judgment entitled him to consideration; and if Dr Balfour or any one else could shake his conviction in the truth of this opinion, he would also succeed in producing in his mind a general distrust of medical evidence in all cases of every description, since in no case whatever can we have evidence which is stronger or more satisfactory." Dr Bennett fully agreed with the remarks of Dr Gairdner. He attributed much of the change which had latterly occurred in practice to an improved pathology and diagnosis, whereby the nature of diseases was better understood, and their detection rendered more exact. "Dr Balfour had attempted to establish the benefits of a 'do-nothing practice' from the results of statistics. Medical statistics, as he would endeavour to show at the next meeting, were altogether fallacious, and undeserving the slightest confidence." Dr Bennett concluded by strongly condemning the system of practice lately sought to be introduced by Dr Forbes and others, to the exclusion of pathology, diagnosis, and the experience of the most eminent men. So the matter rested for a time; but the profession were on the horns of a dilemma, for the mysterious decillionth of a grain of phosphorus was unquestionably as efficacious as phlebotomy. The history of medicine might have rescued the profession from its difficulty, but it seemed to be unknown. Fortunately the meaning of *extractum graminis* was not abstruse, and in time had its effect. In 1855 Dr Bennett published an introductory lecture, in which he acknowledged that large bleedings in the treatment of pneumonia had been abandoned, and that the mortality had greatly diminished under this expectant treatment, not because there had been any change of type, but because large bleedings were never really required, and had also been attended by dangers which had neither been understood nor even recognised.<sup>2</sup> This at once brought the late Dr Alison to the front, and inaugurated the great change of type controversy,

<sup>1</sup> "Notes on the Practice of Skoda," read June 1847; published in the *Edin. Med. and Surg. Journal*, 1847, p. 397. The discussion upon it will be found in the *Monthly Med. Journal*, Aug. 1847, p. 142. In 1857—*vide Ed. Med. Journal*, p. 403—Dr Arthur Mitchell says that in Vienna he found no physician attributing the change in treatment to a change of type, but that all regarded it as due to more careful observation of the effects of treatment. This view also prevailed among the younger men in 1847. The opinion I have given was that prevalent among the older men at that date.

<sup>2</sup> *The Present State of the Theory and Practice of Medicine*, Edinburgh, 1855.

which can scarcely be said to be settled even yet, though the indications of a recurrence to olden views are getting more and more rare; and the pathology of pneumonia is now trending off in a direction which will necessitate the battle being fought on another field if the fight is renewed at all. Dr Alison<sup>1</sup> had no hesitation in saying that if Bennett's statement was a true reason for the diminished mortality, "then the large bleedings must have been an essential part of the cause of the larger mortality, and, even when apparently useful, must have been really inert, or, perhaps, only counteracted in their injurious effect by constitutional vigour, misunderstood by the practitioners." And he went on to argue that any such inference as that we "now possess pathological information sufficiently precise to entitle us to set aside the practical conclusions touching the power of bloodletting over inflammation, which our predecessors had drawn from their observations of disease, and which they attempted to establish as principles in therapeutics, . . . is a very erroneous one, and . . . may on some occasions be a very mischievous one."

In support of these views, Dr Alison first of all appealed to what he himself had already published as to the fallacy of medical statistics applied to this subject, and then went on to state that he had no doubt whatever as to bloodletting being a *summum remedium in maximis morbis*. This statement he supported by a relation of his experience in regard to pleurisy, pneumonia, bronchitis, acute meningitis ("often of scrofulous origin"), rheumatic affections of the heart, etc. He still held that in inflammations seen early, and accompanied with the inflammatory fever usually regarded as its natural effect, "bloodletting is the only effectual remedy, and it is *not safe to dispense with it*." Any change in the relations of inflammatory affections to bloodletting he ascribed to the fact that inflammation not only "often occurred *without such 'febrile reaction,'*" as Cullen and other authors have described as demanding and bearing the full bleedings, . . . but that it now *very seldom occurs with such symptoms*; and, further, that the constitutional fever attending it has very often more or less of the *true typhoid* character." In short, while admitting that inflammations could in many instances be treated successfully without bloodletting, and scarcely ever required anything but moderate or small bleedings, that was only because inflammations no longer possessed the true sthenic character they had in the days of Cullen and Gregory, but had changed their type and become asthenic and typhoid in character. From beginning to end it was a mere statement of opinion, founded on an experience of forty years, no doubt, but resting on no firmer basis than the misleading doctrine of *quia post ergo propter*.

In the discussion<sup>2</sup> which followed there was a general agreement

<sup>1</sup> *Edin. Med. Journal*, March 1856, p. 769.

<sup>2</sup> *Edin. Med. Jour.*, April 1856, p. 947.



in the statements of Dr Alison, but no other arguments were adduced, if we except an appeal to the varying types of exanthematic and other epidemic fevers as confirmatory of the possibility of a change of type in inflammation. Dr Bennett, who was not present at the meeting of the Society, replied in the course of the following session.

In his paper<sup>1</sup> he states—and you will note the contrast between 1847 and 1857,—“It is admitted by both parties that the practice of bleeding in acute inflammations has, within a recent period, undergone a great change; that whereas it was the rule to bleed early, largely, and often repeatedly, that now much bleeding is rarely practised, and is not necessary.” And he goes on to say that, according to Dr Alison, this remarkable change of treatment was due to a change of type of disease, while in his (Dr Bennett's) opinion inflammation is the same as it had ever been, but the principles on which bloodletting and antiphlogistic remedies have hitherto been practised are opposed to a sound pathology, the only object of judicious medical practice being to conduct inflammatory disease to a favourable termination, to cut it short being impossible, and that all positive knowledge of experience of the past, as well as the more exact observation of the present day, alike established the truth of these propositions. These and some other subordinate propositions were enforced with all Dr Bennett's well-known energy, and supported by ample statistics, which were now found not only sufficiently trustworthy, but fully to bear out all that had been said ten years before. The discussion which followed<sup>2</sup> was taken part in by Drs Alison, Christison, Gairdner, etc.; no new feature was elicited, and the arguments were simply repetitions of what had been already said, and were ably replied to by Dr Bennett. To this statement of Dr Bennett's views Dr Alison replied through the press,<sup>3</sup> and this paper was succeeded by a rejoinder from Dr Bennett.<sup>4</sup> Dr Alison argued that while the *morbid anatomy* of inflammatory diseases undoubtedly entitles us to consider “exudation of decolorized lymph” as the essential characteristic of such diseases *post-mortem*, and that after this change had progressed during life to a certain extent, the case could no longer be benefited by bloodletting, and might easily be injured by it, yet that we possess no pathological information which entitles us to doubt that bloodletting in the early stage of the inflammation—when the stagnation in the capillaries and the exudation of lymph are only commencing—may arrest or greatly shorten those local changes, as well as most materially diminish the danger from the general disease.<sup>5</sup> At the same time, there could be no doubt that of late years, and in various parts of the

<sup>1</sup> *Ed. Med. Jour.*, March 1857, p. 769. Read to the Society, 21st Jan. 1857.

<sup>2</sup> *Ed. Med. Jour.*, March 1857, p. 856.

<sup>3</sup> *Op. cit.*, May 1857, p. 971.

<sup>4</sup> *Op. cit.*, p. 995.

<sup>5</sup> *Op. cit.*, March 1856, p. 772.



world, "inflammation seldom shows itself with such general symptoms as demand, or would justify, in the opinions of the practitioners treating them, or indeed would bear, the large bleedings which were formerly regarded as the appropriate remedy for it, which accordingly are seldom practised."<sup>1</sup> In support of these views Dr Alison appealed to his own experience, adducing also that of many of his compeers.<sup>2</sup> He also asserted that though Cullen and Gregory were not adepts in the modern methods of diagnosis, they were yet very good judges of the power of bloodletting in the treatment of such inflammations of the chest as they were in the habit of seeing.<sup>3</sup> And to show what these were he quoted the case of a young man from whom Dr Gregory took ninety-seven ounces of blood within forty-eight hours—the last bleeding leaving the man in convulsions, the students rushed from the ward, and Gregory himself "had his own share of uneasiness." This, however, we may remark, was not an everyday case; Gregory himself acknowledged that. By-and-by he triumphed over it; he not only published it, but he boasted in his clinical lectures, as was told me many years ago by one who heard him, that "within a week it was heard of in Geneva," a great feat for those days. Alison concluded by stating that if "Dr Bennett's pathology leads necessarily to the belief that the principle in therapeutics which the great body of practitioners, since medicine has been a subject of reflection to mankind, have adopted in regard to the effect of bloodletting in the early stage of inflammatory disease, is false, I confess that I should think that a much better reason for setting aside his pathology than their therapeutics."<sup>4</sup> Dr Bennett rejoindered,<sup>5</sup> that if bloodletting, to be efficient, ought, as Alison had stated, to be practised within the first three days, the records of the Infirmary would prove that bloodletting, when it was largely practised there, was very rarely had recourse to at that early period, even by Alison himself. Dr Alison was mistaken in thinking that he (Dr Bennett) took his pathology from the dead body; his observations were made on the transparent parts of living animals, and confirmed by the phenomena found to occur in patients affected with inflammatory disease, all of which were consistent and explicable by what was discoverable after death. He did not doubt that those medical men who practised these bleedings believed them to be beneficial, and that they saved life. He considered that the real test of a successful practice was not to be found in the relief of symptoms, but was unquestionably that which caused the fewest deaths, and promoted recovery in the shortest time. When inflammatory disease was treated by anti-

<sup>1</sup> *Op. cit.*, March 1857, p. 973.

<sup>2</sup> *Op. cit.*, May 1857, pp. 973, 982, etc.; and for many letters in support of the change of type theory, *op. cit.*, October 1857, p. 292.

<sup>3</sup> *Op. cit.*, May 1857, p. 976.

<sup>4</sup> *Loc. cit.*, p. 986.

<sup>5</sup> *Op. cit.*, May 1857, p. 995.

phlogistics, the mortality was one in three; when, however, treatment was adopted which favoured the natural process of cure, the mortality was only one in twenty-one. These facts appeared to him irreconcilable with Alison's statements and opinions. He did not doubt that patients die from varying degrees of pneumonia; but these variations existed formerly as well as now, depended on the different amount of vital power possessed by each individual, and in no respect supported the theory of change of type. Dr Bennett argued that "an empirical treatment derived from blind authority, and an expectant treatment originating in an equally blind faith in nature, are both wrong; that a knowledge of physiology, pathology, and therapeutics, and not mere experience, is the real foundation for the practice of the medical art, and that a true experience can only have for its proper aim the determination of how far the laws evolved during the advance of these sciences can be efficiently applied to the cure of disease."<sup>1</sup> These statements may be regarded as embodying the gist of what has been called the bloodletting controversy. There was a great deal of controversial speaking at the meetings of this Society, and a still greater amount of controversial writing in the *Edinburgh Medical Journal*, but it was a mere reiteration of opinion on both sides, with some variations in the method of putting it. Dr Bennett and Sir Thomas Watson had a small passage-at-arms on this question,<sup>2</sup> and on the part of Professor Gairdner of Glasgow there was a more bitter attack and reply, in which the personal element was allowed to play only too conspicuous a part.<sup>3</sup> Dr Gairdner was almost the only one who appealed to the history of medicine, showing that the disuse of bloodletting was only a revival of an old story, and not a new departure, and that however favourable the ultimate results of pathological and diagnostic researches may have been to a change of practice, that change was unquestionably not due to the leaders in these inquiries, but to far other men. And he brought forward proof to show that Dr Bennett owed but little to his views in pathology and diagnosis for his present opinions in bloodletting—a fact of which, indeed, no proof was requisite, for every one knew that Bennett's new pathology<sup>4</sup> was published in 1844, yet he not only denounced what he called a "do-nothing practice" in 1847, but continued to practise like other people till 1856, when he was suddenly converted. Nevertheless, Bennett deserved great credit for the energetic manner in which he fought for the doctrine of non-interference when he had once received it, as well as for the rules he laid down as to the only true method of advancing the science and practice of medicine. So far as this

<sup>1</sup> *Op. cit.*, May 1857, p. 1000.

<sup>2</sup> *Ed. Med. Jour.*, June 1857, p. 1084 and p. 1088.

<sup>3</sup> Gairdner's paper, *Ed. Med. Jour.*, Sept. 1857, p. 197. Bennett's reply, *op. cit.*, p. 229. Discussion in Med. Chir. Soc., *op. cit.*, p. 369.

<sup>4</sup> *On Inflammation as a Process of Abnormal Nutrition*, Edin., 1844.



Society was concerned, this controversy was now dropped, till in 1865 a paper was read which gave it the *coup de grace*. I shall refer to this in summing up; for the present, I must diverge into the cognate subject of the change of type in fevers.

The late Sir Robert Christison favoured this Society with a very carefully elaborated statement as to a change of type in fevers, based on his own experience of the previous forty years.<sup>1</sup> In our day, and with our very different pathological views, it is almost incomprehensible how any argument founded on a change of type in fevers could be admitted as proof of a change of type in inflammations also, and Dr Bennett, very wisely admitting some small degree of truth in the one, declined to acknowledge it to have any bearing on the other, or to agree that the change of treatment of fevers, which it was acknowledged had preceded that of inflammations, was in any way connected with it. Dr Christison's paper was indeed a very valuable contribution to the past history of fever epidemics, but, though received by most of the members of this Society as proof of change of type, it was not long of being challenged by him who was by-and-by to prove the great historian of fever, Dr Murchison.<sup>2</sup> Without entering into the question of whether the cases referred to were cases of distinctly different diseases, or merely varieties of one form of disease, Dr Murchison pointed out that the so-called synocha of 1817-20 was the fever now so well known as *relapsing fever*—no new disease even then, but one well known for over a hundred years, and always characterized by a small mortality. "One of the main arguments," says Murchison, "if not the principal one, urged by Dr Christison in favour of a change in the type of fever is, that in the epidemic of 1817-19 the practice of bleeding largely, so far from being injurious, as it would undoubtedly be in the fever which of late years has been most prevalent, was followed by the most favourable results. Thus he remarks, after speaking of drawing 'a legitimate allowance of thirty ounces (of blood) in all,'—this was from himself; Christison had always the courage of his opinions,—'And let it be remembered that we did by no means slay our patients by such bloodthirstiness. On the contrary, the mortality from the whole forms of fever collectively in that epidemic did not exceed one in twenty-two at any period, and was reduced to one in thirty as the epidemic spread and the remedy became more and more familiar.'"<sup>3</sup> "But," adds Murchison, "when no bleeding has been resorted to, the mortality (of relapsing fever) has been smaller than under the heroic practice resorted to in Edinburgh during the epidemic of 1817-20."<sup>4</sup> While even in those days, and taking the statistics of Welsh, the great apostle of bloodletting in fever, the heroic practice was by no means so suc-

<sup>1</sup> *Ed. Med. Jour.*, Jan. 1858, p. 577, and July 1858, p. 38; and for discussion, *op. cit.*, May 1857, p. 1034.

<sup>2</sup> *Ed. Med. Jour.*, August 1858, p. 97.

<sup>3</sup> *Op. cit.*, Jan. 1858, p. 587.

<sup>4</sup> *Ed. Med. Jour.*, August 1858, p. 98.



cessful as it was deemed. In treating his 743 patients in Queensberry House, Welsh detracted 10,166 oz. of blood, and applied 4364 leeches,<sup>1</sup> with this remarkable result, that—

|                                 |                              |
|---------------------------------|------------------------------|
| Of 364 cases bled from the arm, | 20 died, or 1 in 18·2        |
| Of 189 „ leeches,               | 10 „ „ 1 in 18·9             |
| Of 190 not bled in any way,     | 4 „ „ 1 in 47·5 <sup>2</sup> |

These are Welsh's own figures, and do not exactly bear out Christison's assertion. Moreover, the idea that the mortality diminished in 1818, because the profession had become more alive to the benefits to be derived from bloodletting, is explained by Murchison to have been really due to the displacement of typhus (a highly mortal disease) by relapsing fever, which is rarely fatal.<sup>3</sup> When relapsing fever reappeared in 1843, for the first time since 1829, it was thought to be a fever entirely new to Edinburgh, but a reference to Christison's accurate descriptions of earlier epidemics speedily set that at rest, its characteristic lineaments were so distinct. Nevertheless, it is said by Christison never to have "presented the same strong phlogistic or sthenic character as in the earlier epidemics of 1817-20 and 1826-29; the pulse was neither so frequent nor so strong, the heat was not so pungent, the glow of the integuments was less lively and less general."<sup>4</sup> Fortunately for scientific purposes, Dr Christison has translated this somewhat metaphorical language into words which, though less poetical, are more easily understood. He has told us that "the pulse ranged from 120 to 160, it might be large or it might be small; but if the latter, it was wiry; if the former, cordy—that is, always hard and incompressible." While "the heat of the body ranged from 102° to 105°, at times even to 107°."<sup>5</sup> Well, Cormack,<sup>6</sup> and Henderson,<sup>7</sup> and Craigie,<sup>8</sup> the three chief historians of the epidemic of 1843-44, are all agreed that the pulse ranged between 90 and 120, though it was sometimes as high as from 140 to 150, and was hard, wiry, and not easily compressed—the temperature ranging from 104° to 106° (but little attention was paid to temperature in those days, and we have almost no accurate information of this epidemic in this respect). These figures give no indication of any deficiency in "phlogistic or sthenic character," and the accuracy of the observation may be absolutely relied upon, Henderson's being most care-

<sup>1</sup> Welsh, *Practical Treatise on the Efficacy of Bloodletting in the Epidemic Fever of Edinburgh*, 1819, p. 186.

<sup>2</sup> Welsh, *op. cit.*, p. 184, and table xxii.

<sup>3</sup> *Treatise on Continued Fevers*, London, 1873, p. 411.

<sup>4</sup> *Ed. Med. Jour.*, Jan. 1858, p. 592. <sup>5</sup> *Ed. Med. Jour.*, Jan. 1858, p. 582.

<sup>6</sup> *Natural History, Pathology, and Treatment of the Epidemic Fever at present prevailing in Edinburgh*, by John Rose Cormack, M.D., 1843.

<sup>7</sup> "On some of the Characters which Distinguish the Present Epidemic Fever from Typhus," *Ed. Med. and Surg. Jour.*, vol. lxi., 1844, p. 201; read to Med. Chir. Soc., Dec. 6, 1843.

<sup>8</sup> "Notice of a Febrile Disease which has prevailed in Edinburgh during the Summer of 1843," *Ed. Med. and Surg. Jour.*, vol. lx., 1843, p. 410.

fully made in order to contrast it with typhus fever, from which he proposed to differentiate it. For you must never forget that up till that time certainly Christison regarded relapsing fever as only a more sthenic form of typhus; we have his own authority for that.<sup>1</sup> In 1870 synocha—as Christison loved to call it—reappeared in Edinburgh, and spread all over the country; and when we examine the carefully recorded facts of this, the latest epidemic, we find them very closely to resemble those of the famous synocha of 1817. For in Edinburgh in 1870 the pulse ranged from 120° to 130°, while the temperature varied from 102° to 104°, and was occasionally over 106°; and from observations made in the London Fever Hospital, and by many accurate observers in Germany, we find that occasionally the temperature rose to over 108°·5.<sup>2</sup> Now, it may be difficult to define what a “phlogistic character” or a “pungent heat” of skin may mean, but the actually recorded facts teach us that the temperature of the patients in relapsing fever, in every epidemic from 1817 down to the present day, has been very much the same; and from what we know of fatal hyperpyrexia in fever, it could never have been higher than it was in the latest epidemic. So far, therefore, as either pulse-rate or temperature is concerned, there has been no decrease either in “phlogistic character” or “pungent glow” of skin. While if it be claimed that there has, nevertheless, been a loss of a subtle “something” which rendered it less amenable to treatment by phlebotomy, we have another answer to that than an absence of “phlogistic character.” Christison says, “In the epidemic now under consideration,” that of 1843-4, “there never was a question raised about the revival of bloodletting as a remedy, and the answer must be too apparent to require mention.”<sup>3</sup> But Cormack tells us a very different tale. He says that bloodletting was resorted to with apparently beneficial results, but it was given up because “these beneficial changes were found to be not results, though they were the sequences of bloodletting, as was satisfactorily proved by the very same changes frequently occurring as suddenly and unequivocally in patients in the same ward, and affected in the same way, who were subjected to no treatment whatever.”<sup>4</sup> A statement which has been confirmed as to a more recent epidemic by Sir William Jenner, who says, *apropos* of a case of relapsing fever bled in the London Fever Hospital, “Nature unaided by the loss of blood in many cases effected a much larger improvement in a much shorter space of

<sup>1</sup> Discussion on Professor Henderson's paper, *Ed. Monthly Journal*, Feb. 1844, p. 177.

<sup>2</sup> “Relapsing Fever in Edinburgh,” by Claud Muirhead, M.D., *Ed. Med. Jour.*, July 1870, p. 1. Fox, *Med. Times and Gazette*, March 1880. Obermeier, “Ueber die Wiederkehrende Fieber,” *Archiv f. Path. Anatomie u. Klin. Medizin*, vol. xlvii. pp. 162 and 428. For many other authorities, *vide* Murchison's *Treatise on Continued Fevers*, 1873, p. 355, &c.

<sup>3</sup> *Ed. Med. Jour.*, August 1858, p. 592.

<sup>4</sup> Cormack, *op. cit.*, p. 151.



time."<sup>1</sup> The facts just narrated are sufficient, I think, to warrant the conclusion that the first notion of a change of type in fever was based upon the idea that relapsing fever was merely an unusually sthenic form of typhus. This idea was fostered by the results which seemed to follow an antiphlogistic treatment, results which emboldened Welsh to say that bloodletting "is of more value than all the other remedies which have been used in fever put together, and I am convinced that the bad or dubious success of bloodletting in fever has been entirely owing to the too sparing quantities in which it has hitherto been used in that disease."<sup>2</sup> And yet Welsh's own statistics show that the mortality of fever patients who were bled is more than double that of those who were not bled, and a further experience proved that the relief which seemed to follow bloodletting was but part of the natural history of the disease. It would be difficult to find a more remarkable instance of Bacon's *idolon theatri*. The change of type in fever is a myth, yet some of the ablest minds in the profession clung to that myth while life remained.

Very similar is the history of change of type in inflammations. Phlebotomy was early brought into note by the extravagant reward bestowed upon him who has the credit of having first practised it;<sup>3</sup> it rapidly produces decisive results, and even though it fail to cure it never fails to give temporary relief. It is a powerful treatment—a *summum remedium*—and whatever happens to the patient, it is always of advantage to the practitioner in a rude age or among ignorant people. "What devil is in this salt," said an Afghan physician to Ferrier, "for of a hundred patients who have had it only one has survived?"<sup>4</sup> Small wonder—the salt was cyanide of potassium; but the treatment showed power, and did the physician no harm in a region where weakness is the only unpardonable sin. And yet what science there was in the early ages was opposed to this heroic practice. Pythagoras, the earliest medical philosopher, who lived 500 years before Christ; Erasistratus, his grandson, and the great school which adopted their views, and flourished down to the second century of our era, continually protested against phlebotomy as a useless and injurious waste of life. The great and important influence of this school may be gathered from the virulence with which Galen attacked Erasistratus, who had been dead for 400 years, and his followers, who were then the most distinguished practitioners at Rome. His caustic diatribes prevailed; forced at first to flee from Rome, he ultimately returned triumphant, and, partly by the force of imperial favour, partly by the brilliancy of his special pleading, he succeeded in so firmly establishing phle-

<sup>1</sup> Jenner, *Med. Times*, vol. xxiii. p. 31, 1851.

<sup>2</sup> Welsh, *op. cit.*, p. 179.

<sup>3</sup> Podalirius, 1134 A.C. He received the hand of his patient, the Princess Syrna, whom he bled for *concussion* of the brain, with the Carian Peninsula as her dowry.

<sup>4</sup> "Caravan Wanderings in Persia, etc.," *Blackwood's Magazine*, October 1857.



botomy as the rule of practice in inflammation, that almost down to the present day it has continued to be regarded as pre-eminently orthodox. Yet Erasistratus never ceased to have distinguished followers in all ages; and though the discovery of the circulation of the blood seemed to lend irresistible cogency to the arguments of Galen, the doctrines and the followers of Erasistratus still flourished, and were in as high estimation as those of Galen.<sup>1</sup> In the midst of this apparent chaos, where two of the most divergent systems of treatment prevailed, each of them based on opinion, and supported by experience, a seeming light at length arose. Towards the end of the seventeenth century the investigations of Bonetus began to confirm the statement, first made by Lælius-à-fonte, that the lungs were hepatized in cases of death from pneumonia. By-and-by the researches of Valsalva, Morgagni, and Lientaud proved that hepatization of some part of the lung is invariably present in all who die with symptoms of pneumonia. And at last Cullen, having adopted Hoffman's doctrine of spasm of the arterioles as the cause of inflammatory congestion,<sup>2</sup> regarding hepatization as an effusion of blood into the parenchyma of the lung due to this congestion, and believing in bloodletting as the only efficient remedy for spasm, propounded the doctrine that free bloodletting was the sole remedy for inflammation, and that its efficacy depended mainly on the day of the disease on which it was commenced. Whether true or not, we now had a definite statement of the pathology of inflammation, and a system of treatment propounded which seemed exactly to meet the requirements of the case. Bleeding *usque ad deliquium* was a certain means of relaxing all external spasm; the spasm of the arterioles was bound to give way; the only question was, had we got the case early enough—if so, the inflammation must cease, it was jugulated. Nothing could be more plausible than the reasoning. For the first time, and as it seemed for all time, the treatment of inflammation was placed upon an irrefragible and thoroughly scientific basis. A greater than Galen had arisen, before whom all should bow, and to whom, for seventy odd years, almost all did do homage. And truly he deserved it. Think of the scanty material at his command, and how skilfully he used it—the admirable remedy he selected, so well fitted for its work, so unequivocal and so rapid in its action. If the disease was curable, it was cured at once, jugulated. If the remedy failed, it was used too late—

<sup>1</sup> An account of the literature of this subject will be found in a paper entitled "Hæmatophobia: an Historical Sketch," by George W. Balfour, M.D., *Ed. Med. Jour.*, Sept. 1858, p. 214, and somewhat more fully in *An Introduction to the Study of Medicine*, by the same author, Edinburgh, 1865.

<sup>2</sup> *First Lines*, 2nd ed., Edin., 1778, vol. i. § cxxxviii. p. 185, and § ccliv. p. 200. In a clinical lecture by Cullen on the case of Colin Reid, a very interesting account is to be found of his views as to the pathology and treatment of pneumonia. *Vide MS. lectures*, vol. iii. p. 588, in the library of the Royal College of Physicians, Edinburgh.

of that there was the never-failing proof to be found in the hepatization of the lung.<sup>1</sup> Among pathologists and therapeutists there has been none, I think, greater than Cullen. And now all this skilfully elaborated pathology, and the treatment founded upon it, have vanished from our ken, and a new generation of physicians has arisen who have never seen a man bled for pneumonia, and who probably scarcely know how to handle a lancet; perhaps they have never seen one out of an instrument-maker's, and yet in quite recent times the lancet was so universally employed for everything, that even a purge was said to be carried on its point. The change is most marvellous, and we can scarcely wonder that our immediate predecessors believed it could only be brought about by an entire change in the constitution of disease. And yet proof of the reverse lay ready to their hand. In the library of the Royal College of Physicians here we have seven volumes of MS. clinical lectures by Cullen, extending over ten years, from 1764 to 1774, and containing upwards of 200 cases. I have looked over the whole of them, but have been unable to find one single case of pleurisy or pneumonia which could be regarded as typical. Typical pneumonia must thus have been at least as rare a disease in Cullen's day as it is now. There are two, however, which Cullen at first thought might be peripneumonic. The first was admitted on the fifth day of the disease, the other on the ninth. In the first the pulse is said to have been neither full nor hard, yet she was bled thrice. Cullen subsequently acknowledged that the case was simple catarrh with a stitch in the side. The second case is illustrated by an elaborate clinical lecture on the pathology of pneumonia, its clinical history and treatment.<sup>2</sup> This patient's pulse was 126, no other characteristic being mentioned. He was bled twice on the day of admission, and once on each of the two following days. The case was afterwards acknowledged to be one of fever with inflammatory affection of the bronchial glands. The other cases recorded are very much like our ordinary hospital cases, only there are a good many cases of intermittent fever, which was then endemic among us. There are also a large number of cases of inflammatory fever and catarrh, in whom the pulse-rate is rarely mentioned; in a few it is said to be under 100, and it is very often said to be soft and not always full. Yet none of them escaped the inevitable bleeding on two or three days successively after admission, though this is repeatedly stated to have been upon the ninth or tenth day. Now and then, too, Cullen naïvely congratulates himself on the case not having turned out nervous fever, in which case, he adds, "*The bleeding would*

<sup>1</sup> *First Lines*, ed. cit., vol. i. p. 267. Here Cullen describes pulmonary hepatization as a termination of inflammation quite peculiar to pneumonia, and in a MS. note on p. 268 he adds, "I do not remember to have seen one single exception to this in fatal cases of pneumonia."

<sup>2</sup> *Vide* case of Colin Reid, just referred to.



*have been pernicious."* At another time he tells of a case of pneumonia which had been treated as fever, and he expresses a regret that he did not recognise the true nature of the case during life, as he would certainly have bled him, and perhaps done him good. I need scarcely say more.

There are in London several MS. clinical lectures of Cullen and Gregory, and the cases recorded are said not to differ from the ordinary run of cases in the London Hospitals at the present day. One case of double pneumonia, admitted on the fourth day after a rigor, and bled once before admission. His pulse was full and soft; he was bled five times in two days, dying within forty-eight hours.<sup>1</sup> Small wonder, you may be inclined to say; but bleeding in the hands of a skilful master was not so fatal a treatment even when pushed to an extreme. We have in the library of the Royal College of Physicians here one MS. volume of clinical lectures by Gregory, and two volumes of notes of cases taken from clinical lectures, extending over three sessions, 1771-72, 1779-80, 1780-81. In them I found seven cases of pneumonia. One woman, Betsy Moffat, was admitted on Jan. 3rd, 1772. She had her first rigor on the 24th Dec., and had been bled before admission. On admission she was found to be "breathing with the utmost difficulty, and there appeared to be a considerable quantity of matter in her breast, which was rustling in her throat, and which she appeared scarce able to throw up. I then," says Gregory, "diagnosed a peripneumony, or inflammation of the lungs; and from its having continued several days, I thought it was probable that an effusion had begun to take place in her lungs, and that the chances were much against her. The circumstance of delirium was also extremely unfavourable. That is one of the terminations of peripneumonia. A translation to the head very generally proves fatal." Yet Gregory bled her to eight ounces, twice over; purged her well, and gave her a vomit of tartar emetic. Her pulse, which was 134, had fallen on Jan. 5th to 96; on the 6th her head was leeches for throbbing of the temples; and on the 9th she was dismissed cured. On January 16th she was readmitted with a relapse of her former symptoms—her pulse 130. She was treated as formerly with repeated venesections and emetic doses of tartrate of antimony. On the 18th she was insensible, her pulse 104 and feeble, with a rattle in her throat like one dying. Gregory stimulated her out of this state with strong sack whey, hartshorn, and warm fomentations to her legs. Before he left the ward he was able to leech her head to relieve a pain of which she complained. She afterwards had four more ounces of blood taken from the arm, and a blister applied to the side, and was dismissed cured on January 25th.<sup>2</sup> I confess I am lost in wonder alike at the boldness and

<sup>1</sup> *British and Foreign Medico-Chirurgical Review*, vol. xxii. pp. 32, 33, and 34.

<sup>2</sup> A pretty full account of these cases will be found in a paper entitled "Cullen and Gregory upon Change of Type in Inflammation," by George W.



the success of the practice. But there is nothing either in this case or in any of the others, which I need not further detail, to indicate the existence of a disease of a more sthenic or more strongly phlogistic character than we are in the habit of seeing and treating every day. Nay, more, Cullen in a copy of his *First Lines*, interleaved and annotated by himself, has a note in his own handwriting to the effect that the detraction of "ziv." of blood is sufficient to produce fainting in many persons. Yet such persons bear, he adds, subsequent bleedings better, so that they may be even larger than the first, and at last such a quantity may be procured as the symptoms of the disease may seem to require. And in a MS. note he adds, "This fact and rule hold very universally."<sup>1</sup>

According to Cullen's pathology, then, pneumonia was a congestion of the lungs produced by spasm of the arterioles, running on to rupture of the vessels, and effusion of blood into the parenchyma, generally fatal on the ninth day if not previously relieved.<sup>2</sup> Those who died beyond the ninth day had gone on to suppuration, and an exceptional few of them recovered, but they were beyond the pale of treatment.<sup>3</sup> Now and then, however, it appeared that rupture and effusion of blood did not take place till much later, and bleeding was sometimes successful so late as the twentieth day.<sup>4</sup>

According to Cullen's therapeutics, there was only one effectual means of relieving the spasm and preventing effusion of blood, and that was bloodletting, which, though only entirely and certainly successful in the first few days of the disease, might be so exceptionally at any date. It was therefore right to employ it in every case, and at any period of the disease, so long as the patient could bear it. And I am sure you will agree with me, that those who believed in this pathology were right to practise as they did, and that both physician and patient acted wisely, in accordance with their lights, in pushing this *summum remedium* even to an extreme. For when the pathology and the remedy were both so plain, no one, I think, could blame either physician or patient for grasping at a remedy in itself so certain, the only doubt lying in the stage already reached by the disease. In this light the old dogma, *Melius anceps remedium quam nullum*, acquires quite a new and a reasonable significance. Unfortunately this most remarkable pathological hypothesis was baseless: it fell, and with it the treatment founded on it, so soon as the profession recognised that the natural history of pneumonia

Balfour, M.D., *Ed. Med. Journal*, September 1865, p. 213, read to the Medico-Chirurgical Society, June 7th 1865; and also in the *Introduction to the Study of Medicine*, already quoted.

<sup>1</sup> *Op. cit.*, § cccxlviii. pp. 279 and 280.

<sup>2</sup> *Lecture on Colin Reid*.

<sup>3</sup> *Lecture on Colin Reid*, and *First Lines*, vol. ii. § dcccxxviii. p. 231 et seq.

<sup>4</sup> *First Lines*, vol. i. p. 280, MS. note, *editio cit.*

was not in accordance with it. So soon as it was clearly understood that bloodletting could not prevent hepatization, and that patients did recover from pneumonia without bloodletting, then bloodletting was doomed. It had long been known to be full of danger in the hands of all but the most skilful; the very symptoms produced by it simulating closely those for which it was supposed to be needful.<sup>1</sup> I do not think that the profession was sorry to get rid of it. Those who had long practised it were unquestionably astounded: the most certain thing in medicine had suddenly become a delusion, everything seemed slipping from them. We cannot help being sorry for them, and yet it was their own fault. A knowledge of the history of medicine would have enabled them to judge rightly the will-o'-the-wisp which led them astray, and landed them at length in such a quagmire of a theory as change of type, for which there is not, and never has been, even a semblance of a basis.

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## II.—A CLINICAL ACCOUNT OF SMALLPOX.

By JAMES NIVEN, M.B., M.A. Cantab., Fellow of Queen's College, Cambridge.

THE following clinical account of smallpox is based on the observation of the great epidemic in London of 1880-1881. In that epidemic I saw or had the opportunity of seeing about two thousand cases, and made numerous post-mortem examinations. The statements contained in this article are nearly all obtained from notes of cases made by the bedside or in the post-mortem room. I am indebted to Dr MacCombie, of Deptford Hospital, for a revision of this article, and for a valuable discussion of its contents.

In the following remarks only those features of the disease are fully described which are seen in the hospital, the earlier features being to some extent gathered from the narratives of the friends or relatives of patients. Moreover, only those characters of the disease are described which have come under observation; and if in some particulars—for example, in the stress laid on affections of the larynx and on the rapid onset of broncho-pneumonia—I shall seem to introduce a new experience, I can only say that these are the facts as far as I could judge from post-mortem examination.

First, then, as regards the diagnosis at an early stage of the disease. In its onset smallpox, as a rule, is sudden, and is ushered in by fever, headache, pain in the back, and sickness. After forty-eight hours (more or less) a macular discrete exanthem appears on the face, trunk, arms, and legs. I have said that, as a rule, the onset of the disease is sudden, and, I may add, severe; and this is characteristic of smallpox even more than of scarlet fever. The number of cases is comparatively small in which the symptoms premonitory of the eruption are not well

<sup>1</sup> Marshall Hall, *op. cit.*



marked; although in a very small minority the first thing observed is the eruption. In mild cases of scarlet fever, on the other hand, the number is fairly large of those who have seemed to ail nothing before the rash came out or before the tonsils became affected. In typhoid the gradual progression of the symptoms is the rule, and in typhus also the disease often begins mildly, even in severe cases; there is some degree of headache and malaise, and the eruption may be well out before delirium supervenes.

The exceptional exemption from premonitory symptoms in variola is almost always in slight cases, but slight cases are often very sharply attacked.

This is of consequence in the differential diagnosis between this disease and varicella, with which it is often confounded, more especially when the varicella eruption is extensive. A child is brought to the hospital, and is found to have a copious papulovesicular eruption; the vesicles are most abundant on the trunk; they are filled with a clear opaline fluid, and rest on an inflamed base. They are to be found in all stages—some vesicles just commencing on a pretty large red base, some of small size with base not much inflamed, others large and distended with clear fluid, some of these broken. They are very irritable when fully formed, and generally bear evident marks of scratching. In these cases such an amount of eruption in smallpox would almost invariably have a sharp onset, whereas, when one asks the mother whether the child (for I have never seen varicella in an adult) has been ill or lost appetite, she invariably answers (in my experience), "No, sir; he has taken his food well, and the only thing the matter is the pocks," or something to that effect. I have, however, seen one case which developed slight fever in hospital. The distinguishing features of varicella, then, are:—The absence of any distinct illness; the distribution of the rash, which is always most abundant on the chest and back; and the nature of the rash—some of the vesicles being fully formed, broken, and drying, while others are coming out, as well as the absence from the vesicles of that shotty feel which is present in smallpox.

In smallpox, on the other hand, the eruption is never most abundant on the trunk, but usually on the head, face, and about the wrists. The eruption does not all come out at once, and in exceptional cases—which, however, are always well-marked and severe cases—there are fully developed vesicles with papules springing up beside them. Nevertheless, these all approach to the same stage subsequently. The papules are shotty, though this occasionally occurs in isolated vesicles of varicella at places where the skin is tense, *e.g.*, on the wrist. Finally, in fairly severe cases there is always a pretty sharp onset.

Of the symptoms which have been mentioned as attending the onset of the disease—headache, pain in the back, and sickness—headache is the most frequent; indeed, it is almost invariably present,



and is often severe. Sickness is fairly common. Some degree of pain in the back is present in most cases, and in a great many severe lumbar pain.

If we compare these symptoms with those of scarlet fever (of the initial symptoms of which we have many notes) we find that the onset is equally sudden in scarlet fever, but that the most prominent symptom is sickness, which in cases with marked onset is almost always present. Headache, occasionally severe, is not infrequently complained of. Sore throat generally, not always, precedes the rash, and often accompanies the onset. Occasionally in severe cases of scarlet fever diarrhoea attends the onset, for which there are good anatomical reasons. Backache is very rarely present.

In typhus, headache is a prominent initial symptom; backache is not. In typhoid, headache is generally complained of; backache, except as the result of weakness, is not. The most important early symptoms from a diagnostic point of view are, therefore, headache and backache.

There is one class of cases in which the lumbar pain is intense, and where it is capable of giving early indication of the disease, viz., the hæmorrhagic cases of smallpox, and that in both kinds, with and without eruption. And in connexion with this subject I should like to mention a case in which a medical man of my acquaintance was called to see a woman who had been recently confined. She had been suddenly taken very ill; there was no eruption; she complained of agonizing pain in the back, and lay utterly prostrate; there were sordes about the mouth; temp. about 104° F. There was smallpox in the neighbourhood. The suddenness of the attack, the intense backache, and the appearance of the patient, determined him in favour of smallpox as against septic poisoning, which opinion he communicated to the friends, considerably to their displeasure. The woman died before any eruption could occur, but about a fortnight afterwards the mother of this patient, who had been with her, took well-marked smallpox.

In children the initial symptoms of smallpox are not at all so distinctive as they are in adults, partly, no doubt, from their inferior power of expression. As one of a few examples, I may mention that of a girl aged six, convalescing from scarlet fever, in which the onset was remarkably like meningitis. She took suddenly ill, and, when first I saw her, lay quiet in bed with pale face and dilated pupils, and every now and then her face would flush up. She would scream out, and again lapse into her former state. The breathing was markedly irregular, both as regarded rapidity at different times, and as regarded irregularity at any given time. The temp. was 103° F. This condition lasted for about two days, and disappeared with the appearance of the eruption.

If we were to rely on the initial symptoms of the disease just enumerated, we should, in a certain number of cases, be liable to form a false estimate of the prospects of our patient. There is,

however, a sign of some consequence occurring occasionally, which, taken in connexion with the other symptoms, is of considerable importance, the more so as it is liable to mislead: I mean the initial eruption.

Initial eruptions are of three kinds—measly, scarlatiniform, and petechial. As a rule, both the measly and scarlatiniform eruptions come out about a day or less after the onset of the initial symptoms.

The measly eruption affects more particularly the upper part of the body (the trunk and arms), and is very evanescent in character. In fact, it is rare to see it in the hospital, and then it quickly disappears. But many patients tell us of its occurrence, and that the doctor thought it was the measles. They are also quite distinct about its appearance. The most important fact about this eruption is, that it invariably precedes a mild attack of the disease.

The scarlatiniform rash may affect any part of the body, but by far its most frequent seat is the abdomen, wings of the pelvis, and upper part of the thighs. The part next most frequently affected is the axilla, with the sides of the chest, then the arms and extensor aspect of the forearms, then the extensor aspect of the legs and dorsa of the feet. These parts may be simultaneously attacked. The most frequent seat of the petechial eruption is the triangle about the lower part of the abdomen and the thighs. The scarlatiniform and petechial eruptions often occur together. In one remarkable case the whole body was completely covered with a deep scarlatiniform rash, except a large triangular patch on either side of the abdomen, near the wings of the pelvis, which was petechial. There were also many isolated petechiæ scattered over the trunk. This case proved to be one of *variola hæmorrhagica pustulosa*, and died.

The chief features of these latter eruptions, then, are:—1. Their liability to be confounded with scarlet fever, which they often are; but there is no sore throat, and there is probably backache. The sore throat of smallpox is subsequent to, and dependent on, the eruption. 2. Unlike the measly rash, they do not fade before the eruption comes out, but persist for several days after it has appeared. 3. As regards the prognosis of the disease, they furnish no indication. This is contrary to previous assertions, but we have many cases in point.

In unvaccinated cases with this eruption the attack is generally severe, but it is doubtful whether this implies more than that many unvaccinated cases have severe attacks.

In a typical case of smallpox the macular eruption appears about forty-eight hours after the first symptoms; but though it is so in nearly half the cases, the period is liable to great variations, the next most frequent interval being twenty-four hours, then seventy-two, then twelve, to take exact periods. In



one or two cases the symptoms commenced simultaneously with the eruption, and in several there were well-marked symptoms as early as five, six, or seven days before. In one or two cases the symptoms began, to all appearance, with the introduction of the virus, though in these it was doubtful whether the malaise was not a concurrent accident.

The eruption is at first macular, consisting of unraised red spots of size varying from that of a pin's head to the flat side of a split tare. Their first appearance may be on the thighs, or on the face or trunk, but their appearance over the body is nearly simultaneous. In a few hours a good many of these have become papular, and thenceforward the changes occur most rapidly on the face. The centres of the maculæ become pale, raised, hard, and shotty to the touch. New maculæ continue to appear, but as the eruption gets pronouncedly papular, the fresh parts of the eruption springing up appear to assume at once a papular character. The parts first fully papular are the head and face, then the trunk and arms and thighs, lastly the legs.

If now we consider the disease subsequently to the development of the eruption, we at once find that the cases are so widely different in character that it becomes necessary to classify them. The simplest classification is into *variola discreta*, *variola confluens*, *variola hæmorrhagica pustulosa*, and *variola hæmorrhagica vera*, with the proviso that vaccination, besides rescuing many cases from the second two classes, frequently modifies the course of the first two.

1. *Variola Discreta*.—If we take the case of an unvaccinated patient with *variola discreta*, the following is the general course of the case:—The patient is suddenly seized with backache, headache, and, it may be, sickness. The temperature rapidly rises to 102°, 103°, or 104°. The pulse is frequent and soft. These symptoms continue for two days, till a macular eruption appears, when the patient begins to experience relief, and the temperature to fall, which it continues to do till it nearly reaches the normal. The pulse goes below 100 in frequency. The macular eruption passes into the papular stage in the course of a day. In the course of a couple of days the papules have become vesicles. Many of these are umbilicated, and they are pretty large, about the size of a pea. The vesicles, on being pricked, exude some clear fluid, small in amount, because it is contained in loculi, and only one or two of these has been opened. About three days subsequent to this the clear fluid begins to get cloudy, at least on the face, and by another day the vesicles have become rounded projecting bags containing pus. By still another day the vesicles on the trunk and arms are undergoing the same change; later the thighs, and last of all, say two or three days after the face, the wrists, hands, and feet become pustular.

During the vesicular stage, if the eruption is not over-copious,



the patient has regained his appetite, which he may again lose when the pustular stage comes on. If the eruption is small in amount, he retains his appetite the whole time. With the commencement of pustulation the temperature rises, and continues to rise for some days. In about three days after pustulation has commenced, the pustules on the face break and begin to dry up. Later on, the same happens on the trunk, upper arms, and thighs. On the forearms and legs the pustules may be perfect on the sixth day from the commencement of pustulation, by which time the face has probably scabbed over. In another week the eruption will probably everywhere have dried up. The temperature becomes normal about the same time that the legs begin to scab over. Towards the end of the vesicular stage, and during the earlier part of the pustular, there is not infrequently an erythematous condition of the skin between the pocks.

The variation of the temperature may be thus summed up:—It rises rapidly with the onset of symptoms, and reaches its maximum just before the appearance of the eruption. It begins to fall with the appearance of the eruption, and during the vesicular stage falls to about  $99^{\circ}$ . It rises with the commencement of pustulation, and reaches its height again when the area of pustulation is greatest, and falls to normal about the time the legs begin to scab.

The eruption undergoes somewhat different changes in the hands and feet from what it does in the rest of the body. On the face, for example, the pock matures, breaks, and then scabs into a crust, which gradually falls off, leaving in fairly severe cases a depression; on the horny parts of the hands and feet the pus has not tension sufficient to break through the cutis, and the matter dries up into a brown hard scab. Or if, as in some cases, it has never been abundant, it seems to disappear and leave a shell containing no solid matter. Sometimes the eruption on the face, arms, etc., instead of crusting and falling off, leaving a discoloured patch continuous with the skin, takes a yet milder course, and, going through its changes quickly, is thrown off and discloses a small red mound of hypertrophic cuticle rising above the skin. These cases are always mild, but the resulting appearance is quite as unsightly as the depressed pits in severe cases.

Unmodified discrete variola is rarely attended with delirium, and, when present, it is generally confined to the night time. The mind wanders, and the patient is garrulous, talking freely to his home circle or some acquaintance. It is mostly about the beginning of the pustular stage that this occurs. There is frequently sore throat, not severe, commencing with the commencement of the vesicular stage, and caused by the development of pocks on the tonsils and pharynx. There are also a few pocks on the palate, tongue, and mucous membranes of the mouth. Occasionally the presence of pocks, tense and large, causes acute

pain in the hands and feet, especially in the fingers and balls of the toes. This is more marked than in many confluent cases, where the general distress tends to withdraw attention from particular parts. These patients rarely die, and almost always of some complication. The complications will be discussed afterwards.

*Vaccinated Cases.*—Such are the facts in variola discreta if the patient is unvaccinated; but in vaccinated cases the course of events is different, and, where the vaccination is recent and good, widely different.

In some cases the eruption, having become vesicular, stops short, dries up quickly, and in the course of two or three days the skin affection has completed its course. Many of the pocks do not go beyond the papular stage. In many others, about the third day of the eruption a small pustular head develops in some of the pocks, while other pocks attain only the vesicular stage, and in six or seven days the skin affection is terminated. In these cases there is no fever after the appearance of the eruption, and the patient eats heartily all the time.

In still others the eruption goes through its normal course, but in less time. In three or four days from the appearance of the eruption it becomes pustular over the face, arms, trunk, and thighs; in another day on the hands, legs, and feet; and scabs over completely in seven or eight days from the appearance of the rash. These patients, as a rule, eat well, and, as a rule, the temperature is normal.

In still other cases the eruption approaches by all gradations nearer to that in unmodified cases, and all the symptoms are accordingly.

In certain mild modified cases, especially in adults, and more particularly in alcoholics, there is during the vesicular stage most violent delirium, sometimes of the alcoholic type. Then all at once the eruption aborts and the patient regains his mental balance and appetite.

Moreover, occasionally, in unvaccinated cases, the eruption and general course of events, even where the eruption is not succeeded by hypertrophic mounds of skin, proceeds as in cases considerably modified by vaccination. This is, however, rare.

2. *Variola Confluens.*—Let us take an unmodified case. The eruption begins as in the preceding group of cases, except that the maculæ are more abundant. They pass rapidly into papules, by whose sides new papules spring up, until in a couple of days a very thick crop of papules is present, on the head and face at any rate. About the third day from the commencement of papulation the papules begin to develop into vesicles, which shortly run into each other by their coterminous edges, and thus may form extensive vesicular canals. About the same time the face becomes erythematous between the pocks, and swells up. The eyelids become



puffy, the conjunctivæ not infrequently congested and thickened. The legs and hands may be a day behind the face in attaining the vesicular stage. The eruption attacks the palate, throat, and, it may be, the larynx at the same time as the rest of the body. The tongue rarely entirely escapes. Sometimes, along with the palate, it is quite covered with eruption, sometimes the eruption is only on its lower surface.

With the appearance of the eruption the temperature declines, and when the eruption is completely vesicular it is at its lowest, but still above 100° F. It remains low until the eruption begins to get pustular, which occurs first on the face. The opaline lymph of the vesicular stage begins to cloud about the sixth day after the appearance of the eruption, and the face gets still more swelled, the conjunctivæ more thickened and congested. In another day the trunk, thighs, and upper arms become pustular; and in still another day the wrists and legs; perhaps a day later the hands and feet. About the eighth day from the commencement of the eruption the pustular canals on the face burst, and the matter commences to dry. The temperature rapidly rises with the commencement of pustulation, and is at its height—104°–105°—about the eighth day from the commencement of the eruption. At the end of a fortnight from the commencement of the eruption the legs have probably scabbed over; and if the eruption is confluent only on the face, and the case is not a severe one, the scabs dry up and are thrown off, as in a discrete case, only taking longer time.

(To be continued.)

### III.—EXTRA-UTERINE GESTATION.

By WILLIAM ALEXANDER FREUND, Professor of Midwifery in the University of Strassburg, Honorary Fellow of the Obstetrical Society, Strassburg.

(Translated from a German communication to Professor Simpson, by David Smart, M.B., Buchanan Scholar, and read to the Edinburgh Obstetrical Society, 27th June 1883.)

(Continued from page 405.)

IN pathogenesis we have made no real advancement. If we, in reference to the subject of ovarian gestation, suppose that the ovum may develop and become embedded in the Graafian follicle, because it has been retained through the follicle having insufficiently ruptured, and the liquor folliculi having thus slowly escaped, or because the discus proligerus is not straight behind the spot of rupture of the follicle, we have advanced nothing more than an attempt to explain without any real basis of observation. The obstruction which the fertilized ovum, when it has left the follicle, meets with on its way to the uterine cavity may arrest it either away from the entrance to the tube, and compel it to become implanted on the peritoneum (abdominal gestation), or may detain



it in some part of the tube (tubal gestation). Such obstructions are said to be found in atresias, contractions, and twists in the tube through inflammatory processes, etc. It has further been supposed that an ovum expelled from that pole of the ovary which lay furthest from the tube could not be grasped by the stream of serum flowing towards the tube; or that the stream was not produced on account of destruction of the ciliated cells (catarrh) of the ostium tubæ; or the fertilized ovum had been directed out of this stream by some extraneous force (movement of the bowel); or been led into an accessory tubal opening and been misdirected (by a branching of the interstitial part of the tube) into the uterine wall, or detained at the uterine opening of the tube by small polypi or myomata.

The greater part of these suggestions are hypothetical; only some can certainly be proved in individual cases clinically and anatomically. Many cases do not come within any of these numerous categories. One concludes, from the multitude and frequency of the anomalies quoted, that extra-uterine gestation must occur far more frequently than we were up to the present time accustomed to believe, and that they ended abortively in the early stages without symptoms, but with pronounced symptoms in the later stages, although these symptoms belong also to other diseases (hæmatocele). From the observations in the last case (Group B. III.), where I was able to investigate exactly the topographical anatomy and which presented a reliable anamnesis, I think I am entitled to call attention to a functional cause of extra-uterine gestation, of which, no doubt, in earlier times too much was made—I refer to the important psychological causes operating during coitus.

Regarding the place of attachment of the fertilized ovum to the tissues outside the uterus, and regarding the structure of the placenta there, we have no addition to the old observations nor exact histological facts. After the noise as to the disputed possibility of ovarian and abdominal gestation has been settled by the incontrovertible fact of the existence of such pregnancies, nowadays the attempt has been made to represent the whole question of the ovum implantation and the placental formation on the various extra-uterine tissues as perfectly intelligible and in harmony with the newest histological views. Thus the theca folliculi is considered as a bed which contains the elements of a mucous membrane, and which is thus quite suited for the nidation of an ovulum. The placental formation on the peritoneum near the ovaries and tubes is held to be plausible in view of the fact that this region stands in a certain genetic relation with the germinal epithelium, and that this is necessarily only a process going on in a connective tissue substratum. Who feels here firm ground under his feet? Who would further maintain the correspondence of the implantation of the ovum on the peritoneum

with the adhesions of foreign bodies and tumours in the abdominal cavity? Here surely other circumstances come under consideration. Those who delight in analogies may here advance the later and latest histogenetic views regarding the peritoneum. They may point out that in the amphioxus, lanceolatus, in the geophyrea and other animals, the whole peritoneal cavity, by means of its epithelium, takes part in the development of the ovum epithelium. Waldeyer and others, indeed, recently have affirmed the most internal covering of the peritoneum to be epithelium, which is supposed to have adapted itself to the changed condition, and has morphologically altered. This epithelium would belong to the archiblasts like all epithelial muscle and nerve cells. As the peritoneum, according to this, approaches mucous membrane in structure the attachment of the fertilized ovum is not contrary to reason. There even is, histologically, no cause for astonishment if a woman with a diaphragmatic hernia should have a fertilized ovum nestled on the pleura, or, in the literal sense of the term, under the heart, or even in the pericardial sac, were that accessible, and, so far as is reconcilable with her respiration and circulation, should bring it to full development. Moreover, if any one gives rein to his fancy to have a say in earnest investigations he may unweariedly rise yet higher. The uterine milk, which has lately been recognised as an important link in the chain of organic devices for the nourishment of the child, and whether it be derived from the leucocytes or decidual cells, could just as well be imagined as being formed from the histological elements of the peritoneum. The rapid growth of the connective and vascular tissue of the maternal structures for the purpose of fixing and nourishing the ovum, when we look at the growth and nourishment of any living material introduced into the peritoneal cavity is, as it seems, a perfectly obvious phenomenon. For if we sum up all that is required on the mother's part for the commencement and continuation of pregnancy, we seek for nothing more than a comfortable, well-closed-in nest of tissue, a continuous attachment for 40 weeks, and for the purpose of respiration and nutrition of the fœtus a new development of bloodvessels in communication with the vascular system of the child; then the peritoneum appears in every particular remarkably adapted for this. The peritoneal cavity is just a favourite place for experimenters who wish to study the subject of transplantation of parts of tissue and even of entire organs. So the modern clinician might content himself as regards the occurrence and continuation of extra-uterine pregnancy with the histogenetic line of thought now stated. But this goes on the assumption that we here deal only with conclusions from analogy, and who does not know from many examples out of various departments of medicine how uncertain and deceptive such conclusions are? I leave those questions with regard to which I have had no personal experience.



I must mention that adhesion, by means of which foreign bodies have become encapsuled in the peritoneal cavity, or through which tumours growing in the pelvic or abdominal cavity have become fixed, and also, as has been supposed, nourished, cannot be compared with the growth of the placenta. In the first place, I question, according to my experience, the possibility of adhesions, through procuring an increased supply of nutrition, causing tumours to grow afresh when these have not sufficient nourishment from their natural bed, or have become arrested or retrograded in development. The adhesions of such tumours are either sparingly vascular, bleeding little when forcibly separated, or rich in blood-vessels, especially veins—the arteries being few and of small calibre. On a more careful examination of such cases, I have always recognised that some passive congestion in the tumour has caused the dilatation of the veins in the adhesions. If the circulation be disturbed in the pedicle of a tumour (which might consist of the uterus itself) by torsion, inflammatory deposit, or traction, this disturbance will affect first more especially the veins, the arteries being relatively slightly affected. This fact is familiar to the obstetrician in the case of compression or traction of the cord. The numerous veins in those adhesions act as channels of relief often of great extent, when the tumour is passively congested. Of entirely different nature are the adhesions, which stretch between malignant tumours and the peritoneum. These are rich in vessels, specially arteries, and form at the same time channels for the further growth of the new formation. The increase in size of a non-malignant tumour, which has been wholly or in part cut off from its natural bed and surrounded by adhesions, does not consist in an actual growth of its own substance, but either in a suddenly increased congestion, which is not relieved through the wide collateral veins, or a sudden blood effusion into its substance with destruction of the same (sometimes into pre-existing spaces in the tumour), or finally of growth of cysts, with rapid increase of their various contents. Neither these sparingly vascular adhesions, nor those rich in vessels, especially veins, can histologically or functionally be compared with the development of the placenta in the peritoneal cavity. It is just from certain processes in the development of an extra-uterine gestation that we can recognise the great difference between these two formations. When the ovum develops in the abdominal cavity it becomes attached to the maternal tissue, not only by means of the placenta, but also by adhesions all round; it forms for itself a capsule composed of peritoneal adhesions. But the ovum is not nourished by these. Further, there have been described adhesions which form round a foetus, which has escaped from a burst extra-uterine gestation sac, and by means of which the tissues of the same may be preserved for a long time, while the foetus itself shrivels up; the foetus itself cannot develop and grow by means of those adhe-



sions. All those adhesions form ultimately long-persisting structures, which in many cases become thicker and firmer and more numerous. How different from this in every respect is the formation of the placenta!—a new formation of bloodvessels and connective tissue limited to a more or less circumscribed area, growing rapidly, adapted to convey oxygen and nutrient material from the mother, and to pass it on to the child, so that it in a certain space of time reaches a definite size and maturity; a structure, finally, which after this time shrivels up and becomes functionless. If, as has been said, the seat of the insertion of the fertilized ovum is immaterial, being at one time in the uterine mucous membrane, at another time the theca folliculi, at a third time the visceral or parietal peritoneum, if the ovum in the greater part of its circumference has no other attachment to the maternal surroundings than any other living structure which has been introduced into the peritoneal cavity, what follows with regard to the seat of the placenta? This, that on this part of the ovum something of a specific character must act, which, whatever be the maternal structure it meets with, will produce the remarkable new structure of the placenta. This specific irritant is the allantois with its vessels. In this foetal formation lies the formative stimulus which causes maternal tissue to develop into the maternal portion of the placenta. If the allantois remains round the whole periphery of the ovum, as in the case of some animals, the maternal part of the placenta would grow up round the whole ovum. Because the vessels of the foetal placenta, after a certain time, atrophy, the maternal part of the placenta atrophies as well. Under favourable circumstances the foetus may reach maturity in an abdominal gestation in forty weeks, just as in an intra-uterine one. This question of the development of the placenta on the peritoneum has been vainly attempted to be investigated experimentally.

The *diagnosis* of extra-uterine pregnancy has, by the great development of the perfectly safe bimanual examination of the pelvic organs, made great progress. In addition to the uterus we can palpate the neighbouring organs—the normal ovaries, the uterine ends of the tubes; still better, the enlarged ovaries and tubes. By the same means we can determine the sac of an extra-uterine gestation, and on repeated examination, what is of special importance, the rapid growth of the same. It has been rightly pointed out that at the commencement of the gestation the demonstration of the extra-uterine position of the tumour is easy, but not so at the end; conversely, if it is difficult at the commencement to recognise the tumour as a gestation sac, it is easier in the later stages to diagnose pregnancy. In the former case we are aided by the subjective and objective signs of pregnancy, and especially the demonstration of the rapid growth of the tumour, the growth affecting the uterus in a smaller extent; in the latter case by the oft-repeated careful exploration under chloroform. With this aid

we can, in the majority of cases, palpate the uterus and its appendages, and we are always able to dispense with the sound, which is not without danger, as has been correctly pointed out. I may here refer to a condition of the uterus well known to the experienced gynecologist, and lately again insisted on, which will puzzle one for a long time, viz., the hyperplastic elongation, and the irregular, and, at parts, knotty swelling of the supra-vaginal portion in a pregnant uterus. A careful examination under chloroform clears up every case, and shows that we have to do with impregnation in a retroflected uterus, with marked elongation of the cervix.

Where it is of importance to recognise the position of a dead full time or almost full time extra-uterine gestation, the use of the exploring needle gives us a good idea as to the head of the child. One must, however, in rare cases (as in piercing a large vein of the gestation sac) be ready to perform laparotomy.

One point of great importance in the diagnosis, prognosis, and treatment, on which I would lay some stress, is *the situation of the placenta* on a part of the intestinal canal. In some of my cases the condition was suspected before the operation, discovered during or directly after the operation, and confirmed by a post-mortem. The patients in such cases, in their life-time, show very significant symptoms. In the beginning of the gestation the troubles of an intense intestinal catarrh were manifest, with severe colicky pains amounting to catarrhal dysentery. In two cases the ovum perished in the first half of the pregnancy, and symptoms of chronic infection developed, which, in the one case, after opening and emptying the sac, completely subsided; in the other it advanced in severity after the operation, relaxed in a few days, and ultimately again set in and ended in death. The significance of this type of affection is quite evident. The formation of the placenta on the intestines, with rapid new vessel-formation in its congested walls, naturally occur along with catarrhal affection of them. If the ovum perishes, possibly under the influence of union with the catarrhal intestine, then putrid decomposition of the ovum contents takes place, and general infection follows. One can well understand how the infection germs furnished by the diseased bowel can spread through the thin walls of the placental vessels to the ovum. That gas from a healthy intestinal canal can enter into an abscess in the part adjoining, is a surgical observation, but that air, which enters into an ovum of varying age quickly causes it to putrefy, is a gynecological experience. One can advance as an analogy the opinion of Olshausen, who alludes to the spontaneous suppuration of pelvic exudation and ovarian tumours by infection germs out of the intestine, travelling by way of the adhesions. Litzmann has already advanced this as an explanation of the spontaneous suppuration of extra-uterine gestation sacs.

In a process which presents symptoms and topographical con-



ditions so manifold, as in extra-uterine gestation, whose diagnosis is often extremely difficult, whose prognosis is doubtful in the highest degree, whose therapeutic indications for all these reasons are often in many cases doubtful, it is surely important to be able to bring individual groups of cases into the category of simple forms of disease. We must, in such a work, recognise our special clinical task, on the solution of which advance in pathology and treatment of itself fortunately will follow.

According to my own observations, I divide my cases into *four characteristic forms of disease*. The *first* group includes the tubal gestations which are noticed early in the pregnancy by intermittent pains like those of dysmenorrhœa, but above all produce those well-known attacks of peritonitis suddenly setting in, with symptoms of internal hæmorrhage. These attacks, rising in intensity, and frequently repeated, end ultimately, either with a gradual abatement of the peritonitic symptoms in a slow but complete recovery (usually in the first three months of pregnancy), or pass on to suppuration and rupture of the sac into the well-known different seats in the abdomen or pelvis (fourth or fifth month). In very rare cases the fatal result follows on the attack itself, and still more rarely later, under symptoms of peritonitis or exhaustion through suppuration. The objective condition shows a rapidly-growing tumour, which, according to the physical signs, must be considered as the tube alongside of the uterus, which increases to a certain extent, but remains flattened in form. In addition, we have other ordinary symptoms of pregnancy. The *second* group includes ovarian pregnancies. This is characterized by a pregnancy commencing without pain, or with only moderately painful sensations, with a rapidly-growing tumour like an ovarian, alongside of the uterus, which enlarges, but remains flat. Pregnancy may go on till full time, then the foetus dies and undergoes the well-known change. The *third* group includes abdominal pregnancies, with insertion of the placenta on any part of the peritoneum except that of the intestine. This goes on often to full time. At its commencement there are symptoms of pain, but these are often absent—only later is the pregnancy complicated with painful foetal movements which are often misunderstood. The uterus is recognised with difficulty in most cases, often through its malposition and adhesion with the sac. At the end of the gestation occur indications of labour, death of the foetus, with the well-known different changes in the same; finally, its spontaneous elimination by different channels. The *fourth* group includes abdominal gestation, with placental insertion on the intestine. Here we have a pregnancy commencing in the first months with the symptoms described above, especially severe intestinal catarrh, and even dysentery. If the foetus dies, the sac decomposes, and the whole system is affected.

I quite recognise the limits of the importance of those forms of



disease outlined in simple character. These sketches bear the mark of incomplete experience, because we have not cases of interstitial gestation, or gestation in an undeveloped horn. Those pregnancies would belong to the first group; that is to say, pregnancies in pre-existing, narrow, muscular, thick, or thin-walled cavities. Further, I have never seen a tubal gestation go beyond the fourth or fifth month, and never examined any preparation of a tubal pregnancy which went to full time. I give no opinion upon the occurrence of this, but I mention this to show that the four groups given above do not include the whole subject-matter of uterine gestation. I think that to obtain a clear and orderly view of the confusingly manifold phenomena of extra-uterine gestation, we must fix our attention on the common clinical points of several cases. We shall thus gain a clinical survey, true to nature, which will embrace all the groups.

As to *prognosis*, I see no reason for differing from this as most recently given, especially by Schröder. I think with him that the prognosis especially of tubal gestation was formerly considered too grave. On the other hand, if we attend to the symptoms and physical signs which Schröder demands for the diagnosis of tubal gestation, there will be no risk of calling every hæmatocele an abortive gestation. I would draw attention to this point that the prognosis in the fourth group of cases is very serious, and demands the speedy opening, evacuation, and disinfection of the sac.

As regards the principles which guide the *treatment* of extra-uterine gestation, I would not dare to draw those from my own experience and recommend them in all cases. As I have already pointed out, there are varieties of extra-uterine gestation which others have met with, but I have had no experience of them. I have further seen cases in which the diagnosis of extra-uterine gestation which was made by my colleagues was not at all clear, and in which the results of operative interference were not convincing. Who would undertake in such a state of affairs to lay down general principles of treatment, based on his own imperfect experience, and in which cases are rare and run their course rapidly, often ending in catastrophes, so that a recognition of the condition at the time is extremely uncertain. This is an illustration of the aphorism, "*occasio præceps, experimentum fallax, iudicium difficile*."

Why not from the experience of others? one might ask. I am strongly inclined to learn from experience, and gain therapeutic direction from it, and I have often enough moved about in the forests of the history of medicine with pleasure and profit, but the literature of extra-uterine gestation, and especially its treatment, is, with the exception of a few clear spaces, a forest of a peculiar kind. I might compare it to a tropical jungle in which every step forwards required days of work, and which in its irre-

gular tangled and entangling thickets, after wearisome toil, permits of no clear vista.

According to my experience, I would proceed as follows in the *treatment* of cases:—

In the first stage of each group (one to three months) I would cause the death of the fœtus by means of puncturing the gestation sac and injecting morphia. Should the sac rupture spontaneously in consequence, I would not operate. It will always be left to the discretion of the physician whether he should do laparotomy under such circumstances, and restore the abdomen and pelvis to their normal condition. If the patient is in a measure almost in the death's struggle, every operative interference, however well intended, is of the nature of a sword thrust, which on its way to the seat of disease may strike the patient herself. Whether she will stand the stroke, or whether the focus of disease would be met and destroyed, it is impossible to predict. Therefore this procedure will be reserved for such physicians as, provided with energy and self-reliance, and qualified by ability and fortune, can bear the responsibility upon their broad shoulders. The experience is that death in this well-known catastrophe only rarely happens, that the storm in most cases quiets itself, and apparently the worst cases recover. On the other hand, as the operation often fails to discover or control the source of the hæmorrhage, for these reasons laparotomy is contra-indicated. My experience teaches me to abstain from surgical interference, and simply treat the threatening symptoms of anæmia and peritonitis.

When the third month has passed, I would wait and would secure bodily rest, and order a good fitting elastic-padded abdominal belt, and prescribe milk as the staple diet.

I hold the regulation of the bowels as one of the chief points in the management of extra-uterine gestation. Whether the gestation be in a previously-formed shut sac, or free in the abdomen (with or without the placenta being attached to the bowels), a loaded bowel always acts unfavourably on the gestation sac. Adhesions easily form through which the child may possibly become infected. This provision is still more important in abdominal gestation if there is reason to suppose that the placenta is implanted on the bowels. Every physician knows what a serious complication habitual constipation is in peritonitis and in a case of laparotomy. For all these reasons I consider the regulation of the diet and bowels in the way mentioned as a most important matter in the treatment of extra-uterine gestation. It might not be out of place here to disinfect the bowels, as some physicians have recommended.

When the fœtus has died spontaneously, or has been artificially destroyed before viability, I would be guided by indications of the condition of the peritoneum and neighbouring organs. If there were no reaction, I would wait; if there were peritonitis, I would



treat the symptoms, and then operate as in circumscribed exudation—that is, open, evacuate, and drain. If the child were living and viable, I would do laparotomy.

If the foetus be dead, and no disturbance of the peritoneum and surroundings, I would treat dietetically. When local and general symptoms of reaction appear, especially those of general infection, I would do laparotomy.

In the carrying out of this operation the following points require consideration:—

1. The peritoneal cavity must be carefully shut off from the cavity of the gestation sac.

2. The opening and emptying of the latter must be done slowly, so that the placenta may not be detached.

3. The sac, especially the membranes and placenta which are left *in situ*, must be kept antiseptic.

To attain those ends I would make a free incision in the abdominal cavity, then stitch the sac carefully to the margin of the wound, thereafter incise the sac, cut a portion out of its wall, remove the foetus, leaving the placenta undetached; wash out the sac carefully with disinfectants, dry it, sprinkle it with a mixture of taurin and salicylic acid, drain its deepest part with a glass tube, and finally pack it with antiseptic material (gauze or wool). The after-treatment consists of repeating the washing out, omitting the packing when the sac has dried up, and removing the drain when the discharge has lessened. The removal of the placenta and membranes is left to nature.

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#### IV.—SUMMER STUDIES.—NO. II.

By J. BOYD, M.D., Slamannan.

(Continued from page 425.)

In the No. of 25th May last of *L'Indipendente Gazzetta Medica di Torino*, one of the ably conducted and highly readable periodicals published in Italy, I observe a notice of Professor Virchow of Berlin. "A few days ago Professor Virchow was at Naples. This was not the first time he had visited that city alone. He proceeded to the Ospedale Clinico, where, accompanied by Professor Armanni, he received the most enthusiastic reception from the students immediately on his arrival. Returning thanks for this ovation, he addressed them these words in the French idiom:—'You young men are fortunate in occupying so grand a position, placed as you are between two historical monuments—Montecassino and the School of Salerno. You wish to know why I travel in Italy. I will tell you. It is to reconfirm myself in the scientific *faith* which anciently was so profoundly cultivated here. Be not surprised when I speak of *faith*, because science also has a



creed as well as religion. While the latter is indisputable and infallible, that of science admits and allows for apostacies, knowing how easy it is to fall into error. And that these heresies or emendations occur daily, is characteristic of this age of ours, in which, thanks to the rapid intercommunications and relations among the scientists of all nations, the periods of revolution and reform do not occur as formerly at long intervals, and not by the labours of one nation, but of all. It is this mutual amendment, this reciprocal instruction, which ought to constitute the truly sincere alliance among nations, and which allies Germany with Italy.' "

One of the many products of this truly catholic scientific creed spoken of by the world-renowned physiologist of Berlin, the fruits of the combined labours of *savans* of all countries, is presented by an ample, closely printed volume of 970 pages, entitled *Farmacopea Nazionale e Generale Materia Medica e Terapia*, del Prof. Dr C. Ruata, già assistente di Materia Medica, presso la R. Università di Padova—*National and General Pharmacopœia of Materia Medica and Therapeutics*, by Professor C. Ruata, M.D., University of Padova,—Drucker & Tedeschi, Verona and Padova, 1883. The object which the author proposes to himself is to combine in one book the pharmaceutical preparations recognised in the pharmacopœia of the majority of the civilized states, to display their actions and uses, and to give an available treatise to Italian physicians and pharmacists till the long-desired official pharmacopœia is published. His work is based on the editions of the following countries:—Sardinia States, 1853; Austria, 1869, with addition of 1879; Belgium, 1853; Denmark, 1868; Germany, 1872; England, 1867–1877; Russia, 1880; United States of America, 1879. He has made considerable use of the works of Campano, 1823, and of Orosi, 1866–76, and expresses the hope by means of it to enable the one to prepare every receipt, national or foreign, that may come before him, and the other to compare the varying strength of the different formulæ of different nations, which disparity is remarkable. The tinctures of the Austrian pharmacopœia, for example, are generally of the strength of 1 in 5, and the German is 1 in 10. While the syrup of the protioduret of iron in the Sardinia States contains in 100 grammes 66 centigrammes of the protioduret of iron, that of Austria is 12 grammes, and the French contains 50 centigrammes, etc. As regards doses, he has given those of the English pharmacopœia and that of the still more complete German tables.

Dr Ruata commences the list of medicines in alphabetical order with Absynthium, and finishes with Zingiber. After a complete report of the botanic qualities of the plants, the organic chemistry of their elements, the names and methods of their preparations, he concludes with a more or less lengthened disquisition as to their therapeutical actions and uses, varying according to their importance. The same method is pursued with the non-organic or

chemical drugs. I may safely say that in no other work on the subject have I ever met with so full and satisfactory detail of the action of these agencies on the human system; every view that has been advanced by eminent writers of all nationalities is discussed, and the author gives his own conclusions and his reasons for them in a clear, moderate, and modest tone that is eminently convincing. Ample clinical references are adduced, and experimental observations on animals by Italian and foreign investigators are largely quoted, the author mentioning the results of experiments of his own on *rane, cani, e conigli* (frogs, dogs, and rabbits), which would raise a blush of shame at the thought of the legal obstruction to scientific inquiry existing in this country.<sup>1</sup>

The comprehensive nature of the work is such that I cannot recall an instance of any new medicine or new application of the older constituents of *materia medica* which is not found in this volume, and the extensive and encyclopædic references to standard authors and scattered writers throughout the whole field of European medical literature make one wonder how Professor Ruata could possibly have travelled over such a wide field of professional learning.

Familiarity with manipulation of drugs so discernible by those who daily have to handle them is evinced by such hints in page 220, art. *Cantharis*—"The best means of preserving these consists in closing them hermetically in a glass vessel in which is placed a small bottle of ether loosely closed. Perhaps carbolic acid might be equally substituted for the ether, or possibly a piece of camphor." As a pupil of Mr Syme's, I must object to the statement on the applications of iodine, page 487: "In this last affection (hydrocele) it might perhaps be more successful to apply the tincture of iodine externally, after the withdrawal of the liquid, rather than by injecting it in the cavity."

Did space permit, I would have pleasure in translating the entire articles on *Secale Cornutum* as a special specimen of the author's erudition and acumen; that on *Mays*, Indian corn, merits particular

<sup>1</sup> The legislative majority who some eight sessions ago passed in Parliament the Anti-vivisection Act, in deference to the clamours and prejudices of the hysterical spinsters of both sexes, do not seem to have considered the extent and consequences of their procedure. The exploits of these gentlemen on and after the 12th of August remove all standing ground from under them on the cruelty to animals' plea. The effect of said enactment on experimental physiologists is either, *1st*, They have to work lamely and imperfectly with their hands tied with red tape; or *2ndly*, They will have to take on trust, without verification or examination, the statements of continental *savans*; or *3rdly*, They will have to proceed to the continent to make observations for themselves. As men of science, although for the most part moderate and reticent non-partisans, resent being snubbed and insulted, and as they are increasingly becoming the originators and guides of social opinions, it will further the fortunes of no political party to fasten a stigma and grievance upon them, as is done so long as the enactment referred to is permitted to disgrace the statute-book.



mention, as giving a full account of that notably Italian malady pellagra, which the researches of Ballardini, in 1840, connected with the use of spoiled maize, most perceptible in Lombardy, and in that hilly part of it called Bergamasco, the emigrants from which escape, while those that remain suffer extensively. As conclusive evidence of the connexion between this dreadful disease and spoiled maize, the experiments of Professor Lombroso may be adduced: these consisted in the composition of a tincture of the substance in question, which, administered in small doses to forty individuals, produced in the great majority of them symptoms of the malady. Carrying his researches further, he obtained an oil soluble in alcohol, bitter, and smelling like decaying fish; from the tincture he distilled a resinous substance with alkaloid properties, which he considered the toxic principle productive of pellagra, hence denominated pellagrezemio. This locally applied is always caustic; internally, is powerfully poisonous, giving rise to diarrhœa, dyspnœa, paralysis, convulsions, and death in pigeons; diarrhœa, thirst, anorexia, and diminution of weight, and drowsiness in dogs; while in two men, the effects are giddiness, neuralgia, nausea, diarrhœa, and aversion to food till these symptoms are removed by the use of wine; but in another individual a feeling of pelvic weight, burning at the pharynx, anorexia, pruritus, and mental depression. The tincture of maize is now used extensively in Italy in various skin diseases; the carbonized heads are adopted for the same purposes as *secale cornutum*, and the long leafy stalks of the plant have been held in high esteem as a diuretic acting often beneficially in vesical irritation, chronic urethritis. But one useful application Dr Ruata fails to indicate: the Indian meal, when boiled, forms one of the cleanest, softest, most retentive of heat and moisture, and cheapest of poultices.

In the amply sufficient discussion on tobacco the reader would, from the tone of it, be inclined to gather that Professor R. belongs to the small but distinguished minority *who don't smoke*.

In closing this head I may be permitted to tender my congratulations to the Italian doctors of the future in having so comprehensive and attractive a text-book to guide their studies in this department, and to the physicians and pharmacists of the present on their possessing in this publication a standard book of reference, bringing up their knowledge to the latest date.

In a letter I received some time ago from a gentleman occupying a chair in another university in Northern Italy, accompanying a copy of the second edition of his work on practical medicine, the merits of which have been fittingly recognised by the speedy consumpt of the first edition, necessitating a new publication in furious haste—*stampata in fretta e furia*—he tells me that matters in his country are at present in a transitional state as regards regulations for medical education and licensing, pending the passing through Parliament of the bill brought in by the Minister of Public In-



struction, Baccelli. I have not yet met with an account of the nature or provisions of this bill, but observe that it is highly spoken of in some eminent quarters. In the last July No. of *Unsere Zeit*, the illustrious Professor Gustav Mayer, of the University of Gratz, advocates forcibly the project of Dr Baccelli, and states that on its approval mainly depends the future of study in Italy. Among the other truths contained in his full and important article, Professor Mayer writes this also:—"The position that Italy now holds in science is not by its universities, but almost in spite of them, and it is hence to be anticipated that the Italian population will be raised to the highest point of cultivation when their universities resume the position they once held—that of the harbinger of free science." He concludes with, "The Minister Baccelli may rest assured that the sympathies and best wishes of the most select minds of Germany are on his side in the struggle for this magnificent project."

In March last I received a parcel of books from Madrid, accompanied with a letter from Dr Frederico Rubio y Gali, calle de Alcala, couched in the terms of refined courtesy which high-class Spaniards know so well to employ. These publications consisted of *Reseña del Primor Ejercicio del Instituto de Terapeutica Operativa del Hospital de la Princesa*—*Review of the First Labours of the Institute of Operative Therapeutics in the Hospital de la Princesa for 1881*. The second and largest volume was the same for 1882. This institution, for which, by royal order, Don Frederico was designated Director in May 1880, commenced its clinical organization with two wards of twenty beds each, one for males, the other for females, with two other rooms on the ground floor of the right wing of the hospital, one of which was devoted to surgical cases in children, and the other for the newly operated and cases requiring being set apart. That of the children had, however, to be ceded to the pharmacy, so that three wards are now available. These are described, with their fittings, and much stress is laid on the white colouring within them as favouring the extreme cleanliness so indispensable to hygiene. After varied experiences of air and water cushions, they have come to the conclusion that the most convenient and most efficacious in preventing bed-sores are the *gotieras de suspension*, although the unusual nature of these bedsteads give rise to much surprise to visitors on seeing, as they say, *the patients hung*.

The regulations as to exercise in the open air in cases admitting of it, the visits of relatives, and the introduction of food, etc., are detailed, with the duties of the nursing sisters, and grateful mention is made of the valuable assistance the staff of the hospital derives from the "Junta de Damas," the Ladies' Association, for numerous works of charity to all and sundry in the institution. In addition to these wards there have been obtained some smaller rooms, where out-door patients have been seen and treated, on the

Mondays, Wednesdays, and Fridays, by Dr José Gil y Valero, aided by a number of practitioners who take it in turn.

The staff comprises a consulting surgeon, Don Juan Manuel Sanchez Bustamente, nine Profesores Matriculados, eight Profesores Ayndantes, and five Profesores Alumnos, all of whom seem to constitute a consulting committee for studying and discussing the cases as they arrive, and deciding on the treatment to be adopted, meeting at a fixed hour each forenoon, and allowing nothing to stand in the way of these scientific reunions, from which all admit receiving the utmost benefit from mutual criticism and friendly discussion. The circumstance of most of those gentlemen being Andalusians serves to give a cheery, pleasant tone to their arguments, into which they get the Castellanos, Navarros, Austurians, etc., to fall, which obviates a great discomfort originating in "our old disputing habits, and, from our national character, rather quixotic and somewhat presumptuous."

The examination and consideration of the cases appears to be a species of thinking aloud, which, if effected in technical language, may not be disadvantageous to the patients, while instructive enough to the comprofessionals present. We find a series of cases described of especial interest. One particularly—*exostosis eburnea* of the temporal region—merits attention as showing a source of deception in the impression of osseous mobility produced on tactile examination, where it is only the scalp that slides over it. The woman operated on had a growth, firm and dense like ivory, on the squamous portion of the temporal bone, about the size of a China orange. In removing it Dr Rubio employed the apparatus used by dentists for perforating and cutting teeth—a stalk supporting some wheels moved by a pedal. A large wheel, hollowed in its circumference, transmits by means of a cord to a smaller wheel the motion caused by the pedal. A simple mechanism changes the transverse rotatory movement to a lever, flexible in all directions, and to the end of this is articulated the perforating needle or the small circular saw that cuts the tooth. This *arbol de dentistas*—dentists' tree—is so useful and so susceptible of so many varied applications in operative surgery, that the author is surprised it is not yet included in the modern lists of surgical instruments.

In the case in question, where the gouge was unavailable from density of texture, and the mallet and chisel, which would only have produced a series of cranial fractures, no unfavourable effects followed, and the hairy scalp has healed over the surface, except on a spot about half a square centimetre, without sign of caries or necrosis.

The impression of candour and superiority to everything savouring of professional vainglory which is produced by the reading of the volume, is heightened by the ample record of a fatal case of hysteritis and pyæmia caused by a laminaria tent introduced into the cervix uteri to remedy atresia of the canal and consequent



dysmenorrhœa. The tent was inserted with the usual precautions, and the patient instructed how to extract it by the cord when it became uneasy, which she attempted through the night, but failed; called in aid the attendant surgeon, who also had to desist until assistance was got in the morning, when, with the use of the speculum, the laminaria was extracted with toil and difficulty, when it was found the extremity was globular or head-like. Notwithstanding the most vigorous and judicious treatment, the patient succumbed on the fourth day.

Dr Ariza gives a paper on "Phthisis Laryngea," which gave a full description of the latest views on the pathology and treatment of this malady, and the volume is completed by a tractate on the Art of Amputation, a translation of which would have been most acceptable to us country practitioners in days before Mr Lister clipped our wings and took the wind from our sails.

The *Reseña* of 1882—the second volume—begins with an affecting account of the death of Dr José Gil y Valera, Profesor Alumno, who died, æt. 27, of aneurism of the aorta. It is stated that this young man's birth was remarkable, inasmuch as it very nearly caused the loss of his mother. Twenty years previously Dr Rubio chanced to be in Potro's shop in Seville one evening, when a sergeant entered, agitated and breathless, asking if a doctor was here? "What is it?" "My wife had a son. A frightful flooding took place, so that before the medical attendant could do anything for her she died. After examining her for a time, and seeing no signs of life, he left. I entered the room, and, looking at my wife, I thought she breathed." Dr Rubio went off at once to the house, which was near. On examination it was doubtful whether the young woman was dead or in a swoon. He sent for spt. ammonia; moved and uncovered the body; dashed cold water on it. The thorax moved with a slight inspiration. Introducing the hand, he extracted the placenta. The pain recalled the patient to life. He prescribed what was necessary, and directed the practitioner to be sent for.

Twenty years afterwards a lady called on him, introducing herself as the patient he had come from Potro's shop to save. The boy had chosen the medical career. Her husband had risen to the rank of lieutenant-colonel, and her cousin the bishop had supervised her son's studies; she now wanted Dr Rubio to take him as assistant. Reluctantly he acceded to her wishes. The youth attended the consultation rooms punctually and unobtrusively, said little, and discreetly retired without requiring intimation in delicate cases, and by-and-by showed much aptitude for diagnosing, applying dressings, etc., neatly, and for five years endeared himself to all in the institution by his modesty, prudence, zeal in study; and the masterly and exemplary manner he discharged the duties of superintendent of the dispensary was gratefully and clearly acknowledged by the professors and students. He died a martyr to science and humanity.



After rather a diffuse dissertation on the mental qualifications necessary for the operative surgeon, the need for civil as well as professional courage in many emergencies, a certain hardness in the Spanish character is pointed out, the product of their frequent wars and *fiestas de toros*. The author proceeds to give a continuation of a number of cases described in the first volume, and manifests the most laudable desire to give the whole truth, and nothing but the truth. Cases of epithelioma appear to have frequently occurred, and three different types of them are discriminated, with their appropriate treatment, the danger of *nitras argentii*, and the benefits obtained from the chloride of zinc applied in liquid form.

Some plates of gigantic lipomas on the inferior extremities, and their successful excision notwithstanding an outbreak of hospital erysipelas, are given. The clinical histories, related in a fluent, picturesque style, contrast strongly with the somewhat arid tone of British treatises on medical matters, although of late years a considerable literary improvement is perceptible in the style of the latter. The cases and operations described clearly show that the surgeons of Madrid are quite on a level, as regards erudition, operative capacity, and general command of their subject, with their contemporaries in other capitals. But good sense and sound judgment are more apparent than originality or invention. As Edinburgh men would say, they belong more to the school of Spence than that of Syme or Lister.

Dr Ariza occupies the half of the rest of the volume by a treatise on Laryngology; and Laryngoscopy is briefly referred to as the discovery of the Señor Manuel Garcia, whose experiments, crowned with success, were communicated to the Royal Academy of London in 1855, which estimable body received and shelved the new discovery. At the end of some years a copy of these memoirs, printed by the author, fell casually into the hands of Türck of Vienna, who recognised their importance, commenced to repeat Garcia's experiments in the hospitals under his direction, and called them into general medical notice; attracting among others Czermak, who introduced, in a course of lectures in 1860, the new speciality to Paris; and after this epoch Fauvel, Morrel-Mackenzie, Bourillon, Tobold, Bruns, and many others, have made quite a galaxy of authorities on this subject. After a short reference to the simple instruments requisite for these explorations, Dr A. gives a full and graphic description of the difficulties in their application owing to irritability of the fauces in many patients, the tendency to cough, nausea, and vomiting produced by the insertion of the mirror to the palatine arch; also the best mode of eluding them, by enjoining deep steady respiration, and the sounding the vowels a, e, i, or getting the individual to sigh. It has been said, "Spaniards don't suit for laryngoscopy," that the southern races are inferior to those of the north for those examinations, a statement Dr Don Rafael

has himself heard repeated at the cliniques of Tobold and Lewin in Berlin, and that of Oertel at Munich. But the points he lays down are, if carried out, sufficient to overcome the obstacles presented in any nationality. Several cases of chronic laryngitis, with the pathological appearances, are cited, and the author very sensibly objects to the numerous varieties that have been instituted of this malady, regarding them as mere degrees of the same process.

"It is thus that the pharynx, comprehended in all its extent, and with the isthmus of the fauces, is the chosen seat of pathological manifestations. Scrofula, arthritis, herpetism, anæmia, chlorosis, hysteria, syphilis, lepra, lupus, cancer, smallpox, scarlatina, measles, here express themselves in greater or less degree of activity."

"The causes generally recognised as productive of this laryngopathy we are now studying act only on constitutions affected by these morbid influences. The professions of singer, advocate, actor, preacher, the use of tobacco and alcohol, the respiration of atmospheres charged with powders or gases; exposure, damp, abrupt changes of temperature, have not the influence attributed to them if they lack suitable soil to work on. Even the very catarrhs, which seem specially due to mere exposure to explain their frequent manifestations, are referable to a predispository diathesis." The local treatment of these cases in the hospital is mentioned, as glycerine iodates to 4 per cent.; nitrate of silver solution to 4 per cent.; saturated solution of tannin, glycerine morphiated, to 6 per cent.; alum, bicarb. soda, chlor. ammonia, and cyanoxide of iron, which are the most frequently employed.

Some cases in each division of laryngitis hyperæsthetica, tuberculosa, paralytica, and benign neoplasms of the organ in question, are given succinctly, and the *consideraciones* accompanying them, with the illustrative diagrams, are so judicious and instructive that I regret the want of space forbids further mention of them, as also the second division of Otology, the first work on this subject yet published in Spain, and which, the author modestly hopes, will aid in traversing the distance now existing between his country and those lands where this study has attracted great favour.

The book is completed by a short but full and concentrated tractate on "Electricity" by Don Serafin Buissen, who was intrusted by Dr Rubio with the charge of the electrotherapeutic applications in the hospital. Some cases of cerebral hemiplegia, and several others of hysteric paralysis, are quoted, where the success obtained was highly satisfactory, and the concluding pages show that Don Serafin has thoroughly mastered what is yet known on the subject.

In addition to his previous kind attentions, Professor Sota of Seville has now sent me two of his original communications, one written in accurate, fluent Italian, published in the *Archivi*



*Italiani di Laringologica*, entitled "Una Mignatta estratta dalla Laringe quindici giorni dopo che vi era penetrata"—"A Leech extracted from the Larynx fifteen days after it had entered therein." It states that on the 3rd August last a man of 64, tall and robust, presented himself at the Polyclinica of Seville complaining of blood issuing freely from his mouth for fifteen days past. Fifteen days previously, after drinking cold water when the body was heated, he immediately felt constriction in the throat, respiration difficult, and voice extinct. After this he was obliged to cough continuously by a sort of tickling in the larynx. Several hours afterwards blood commenced to issue from the mouth, a little at first, but afterwards abundantly. He was able to swallow both solids and fluids easily. He slept badly, accessions of suffocation awaking him continually. In a few days he became visibly thinner, losing strength and colour.

On examination Prof. Sota found temperature normal, pulse rapid and weak, respiration painful, strident, and markedly quickened, the thorax dilated fully, and vocal vibration normal, as also percussion and auscultation, though the latter was impeded by the laryngeal stridor. Having introduced the laryngoscopeal speculum, he discovered a leech fastened to a reddish elevation of the epiglottis, immediately above the anterior commissure of the cords, and extending upwards and backwards till the caudal extremity was fixed in the right arytenoid. The patient then stated that the water he drank was that of a stagnant ditch.

After five several attempts, necessitated by the restlessness and indocility of the sufferer, Prof. Sota succeeded in extracting the annelide with the laryngeal forceps. The respiration immediately became regular, the cough disappeared, the voice was sonorous but somewhat hoarse; the subject felt an inexplicable wellbeing.

As the patient had not the slightest suspicion of carrying such a tenant in his larynx, without the laryngoscope the diagnosis was most obscure, and this shows that the general practitioner requires to be versed in the instrument as well as the specialist. He was fortunate, inasmuch as no forcible nor maladroit handling had been applied to so delicate an organ, nor the inhalation of salt or sulphur vapours, nor tobacco smoke.

"I have already published, in the medical journals of Madrid, the history of several cases of leeches in the larynx, easily detected by means of the laryngoscope, and thus extracted easily, speedily, and harmlessly. When in a medical society the most efficacious method of extracting them was discussed, some affirmed they had succeeded in like cases by administering solution of sulphate of quinine; others denied any value to this medicine, even when an excess of sulphuric acid was given to dissolve it; others lauded the powers of tartar emetic; while others still pinned their faith on tobacco.

"It is therefore not to be wondered at that village doctors should



continue to make use of similar medicines when many members of a scientific corporation should thus vaunt their powers. Unfortunately for the patients, most of the substances recommended only serve to damage the respiratory passages and augment their sufferings.

"The subject of the present history was unexposed to the use of such means, and thus it was that immediately after the leech was extracted he felt himself cured. In such accidents the laryngoscope not only enables us to examine with precision the exact seat of the animal, but also to extract it with rapidity, safety, and freedom from all hurt to the patient."

Along with the Italian relation Dr Sota sent me an important paper in his native Castillian, "Goma superado en la region Infra Hioidea"—"Formation of a Complete Laryngeal Fistula—temporary cure, tubercular laryngitis ulcerosa, syphilitic phthisis, and death." As it appears that only three similar cases are on record, one by Dr Lefferts, New York, one by Pugin Thornton, London, and another by Krieg in the *Wiener Medizinische Zeitung*, I hope to have an early opportunity of submitting a complete translation of this treatise to the readers of the *Edinburgh Medical Journal*.

## V.—ADDRESS DELIVERED AT THE MEETING OF THE SCOTTISH MIDLAND AND WESTERN MEDICAL ASSOCIATION on 12th October 1883.

By JAMES LONGMUIR, M.D., Bathgate.

GENTLEMEN,—Allow me to return you my heartfelt thanks for the honour which you have conferred upon me in electing me President of the Scottish Midland and Western Medical Association.

To preside over the meetings for the year we are now entering will be my duty, and it is to be hoped a pleasure, and that in my shortcomings you will be generous to pardon me.

On the usefulness of societies such as this it is quite unnecessary to dwell, as that has been gone over by some of your former presidents in language far more elegant and emphatic than I can employ. No one can deny that the study of medicine, like the study of other departments of practical science and art, has been greatly promoted by associations like this and kindred societies.

I have sometimes thought that whilst our Society has done good work in raising the status of our profession by cultivating good fellowship amongst its members, getting grievances redressed, and watching the medico-parliamentary debates, and contributing its unit of strength in supporting good measures, I have also thought that our meetings might be made more interesting and instructive were papers read or speeches delivered upon some medical or surgi-

cal subjects by members ; indeed, I don't see why this Association should not be conducted after the manner of the Medico-Chirurgical Societies, or branches of the British Medical Association.

It must be acknowledged by us all that as iron sharpeneth iron, so does mind stimulate mind to sharpen and strengthen all those intellectual faculties that are best calculated to advance our knowledge and develop the higher types of professional character. I am sure we have all felt inclined to be more industrious and zealous in our duties after attending such professional gatherings ; indeed, the being present at such meetings, and taking a part, help to keep us out of the groove of inactivity and monotony, especially those of us who practise in the country. Associations such as those I have mentioned, constituted for the purpose of cultivating professional knowledge amongst its members and the general advancement of medical science, have been the means of bringing to light many valuable essays, and even volumes, and given an impetus to many young practitioners to excel and be ornaments in the noble calling of medicine, and thus, like many flowers, were not born to blush unseen.

This time last year your President, Dr Willis, gave an address on the Report of the Medical Acts Commission. It was a very appropriate one, because the Medical Act Amendment Bill was introduced the following session by the Government, and was speedily passed through the House of Lords, but the jealousy and discordant feelings as set forth by deputations sent from the universities and corporations obstructed the bill, and prevented it being read a second time in the House of Commons ; of course, the pressure of business at the end of the session also contributed in preventing the Government from passing it. The past two years have been altogether exceptional in the history of medical reform, as the Government has been acting energetically with the various universities and corporations, and I may say the profession, in the promotion of medical legislation. The extreme opposition to the new bill made by some of the medical corporations, I am glad to say has dwindled down to the discussion, merely, of a few matters of detail. I believe no previous bill ever received such general support, and undoubtedly it was the result of the evidence taken before the select committee of the House of Commons, which sat during two sessions of the last Government, by which all the different medical bills of every shade were critically examined. The Government, seeing the difficulty and conflicting interests of the different universities and corporations, appointed the Royal Commission on whose report the Medical Bill is based.

The particular points of the bill are : (1.) That every one shall be required to pass a final examination in the three branches of medicine, surgery, and midwifery, before being eligible for registration as a qualified medical practitioner. (2.) That this examina-

tion shall be conducted by some body other than any of the existing corporations. (3.) That the general body of the profession shall be represented on the boards controlling these examinations.

The relation of the universities to the corporations and extra-mural lectures is well brought out by the deputation of university professors to the Lord Advocate. Without going into a lengthened argument here, I may state for myself, that I rather take the universities' view of the bill. The fear of the extra-mural teachers being kept out from the board of examiners is I think groundless, because the corporations could appeal to the Medical Council or the Privy Council should they feel that they were being treated unfairly. The remarks made by one professor were explicit and satisfactory. He said, "The fundamental principle in the constitution of the Medical Board is, that it is to be representative of both universities and corporations. I therefore contend that there is no desire on the part of the universities to acquire by means of the proposed Medical Board either a monopoly as teachers or a monopoly as examiners, and that even if the desire existed the monopoly would never be allowed by the Medical Council and Privy Council."

With these few remarks on medical reform, I shall not detain you longer than merely state that I believe the bill, from being in no way a party measure, and from having secured the support of the leaders of the opposition, and as the Government is determined to settle this long-agitated question, there is every probability that it will pass next session.

### *Epithelial Cancer in Paraffin Oil Workmen.*

To follow up what I suggested above, that it would be interesting and perhaps instructive to have papers read and discussed at our meetings, I have prepared a short article which, with your permission, I shall read now.

Since ever sin prevailed, and so long as it continues, man will be subject to all sorts of disease, or, to use the phrase, "Man is born to trouble as the sparks fly upwards." Some people decay and die without much apparent bodily suffering; others pass away gradually, after having undergone severe pain, even agony, for years.

The disease to which I wish to direct your attention at this time is classed among the latter, if active steps are not taken early to eradicate it. I mean chimney-sweeper's cancer, but which name, I think, may now be changed to paraffin-oil-workmen's cancer, as it is now met with more frequently amongst them. There is every probability that this disease will be more and more encountered as the manufacture of mineral oils and their bye-products is assuming to be one of the largest industries of Scotland. I have been surgeon to Messrs Young's Paraffin Oil Company's works at Bathgate above twenty years, and during that time I have met



with not a few cases of this disease which, professionally speaking, is called epithelial cancer.

This disease, like all forms of cancer, differs from all normal structures from being a new product, never existing in a healthy system, and possessing peculiar vital properties and organization. It occurs as warty nodules or ulcers, and is much less rapid in its growth than scirrhus, encephaloid, melanosis, colloid, but it resembles them in its tendency to infiltrate, ulcerate, and extend to the lymphatic system, and to induce death by cachexy.

As to its pathological history I shall not detain you long, further than state that epithelioma or cutaneous canceroid, as named by Zeigler in *Macalister's Pathological Anatomy*, occurs in the skin and all the mucous membranes covered with squamous epithelium, in the mouth, pharynx, œsophagus, bladder, vagina, etc. The cylindrical epithelial cancer has its seat chiefly in the intestines and uterus.

The origin of the disease begins by a local increase of epithelial cells and hyperæmia induced by some constant external irritants, such as the use of tobacco-pipes on the lips, or the friction of sooty, oily clothes on the scrotum, etc. By a process of proliferation and degeneracy of the nuclei the volume of the disease increases; the cuticle yields to the pressure exerted by the softened and partially disintegrated mass, which is discharged in the form of brownish crusts. The ulcer may imperfectly cicatrize or remain as an open sore, covered with a loose scab. This process goes on repeating itself, the ulcer extends, the skin and subcutaneous tissue become involved and infiltrated, the nearest lymphatic glands enlarge and become the seat of the canceroid poison, muscle, bone, and all surrounding tissues ultimately becoming affected. Epithelioma, as seen on the scrotum, generally begins from dry harsh warts ending in ulcers, followed by the destructive and painful course above described. It should, therefore, seriously engage the attention of all surgeons who have professional charge of workmen employed in mineral oil works.

I believe it is the experience of more medical practitioners than myself that epithelial cancer of the scrotum is rarely met with in any other class of workmen now; indeed, I never met with one. I may also state that I have never seen it in a person under forty years of age.

*Treatment.*—Of all the forms of cancer, epithelioma, if operated upon early, gives the most satisfactory results, as its character is local at first. I have operated often for this disease, and the experience gathered just confirms the treatment recommended by the best surgeons, viz., to excise freely either in the warty or ulcerated stage.

When the ulcer on the scrotum is allowed to grow the size of a shilling, there is very great risk of the disease returning in two or three years, if not to the part first affected, to the glands in the

groin, and there ulceration on their surface and surrounding tissues takes place, the lymphatics and veins become obstructed, and the whole leg from below the disease becomes enormously swollen, and after about twelve months' painful suffering and exhaustion from suppuration, the patient dies; or, it may happen that hæmorrhage through ulceration into a large blood-vessel hastens the end.

Some years ago I sent such a case to Edinburgh Royal Infirmary. The leg was so enormous in size that some surgeons thought it was a case of elephantiasis, until the full history of the patient was obtained.

Caustics have been recommended, and I have tried some, such as nitric acid, chromic acid, dried sulphate of zinc, etc., but never felt pleased with them, because their application was too painful, and the healing process too slow; besides, I think that the hyperæmic state of the surrounding parts from the irritation of the caustic is apt to excite the neighbouring glands to absorb the canceroid poison.

*Preventive Treatment.*—All mineral oil workmen, especially those subject to warty growths, as frequently seen on the arms and other parts of their bodies, should be advised to wash themselves thoroughly in a tepid bath three times a week in the summer, and once a week in the winter; and daily, before going to work, to anoint their arms and private parts with some vegetable oil or animal fat, such as olive oil, rape oil, or common lard; and when they return from labour, not to spare soap and water in washing themselves. Messrs Young's Company kindly, at my request, erected baths for their workmen. They are a great blessing to all who use them, particularly so to those who have no homes of their own, but live only in lodgings.

Gentlemen, I must now conclude by thanking you for the patient hearing you have given me. I may have told you nothing new, but if I have only drawn your attention more directly to this disease, so that preventive measures may be advised, or early excision adopted—pain thereby allayed, and life prolonged—I will feel that I have done a duty.

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## Part Second.

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### REVIEWS.

*A Treatise on Insanity in its Medical Relations.* By WILLIAM A. HAMMOND, M.D., Surgeon-General, United States Army (retired list), Professor of Diseases of the Mind and Nervous System in the New York Post-Graduate Medical School. London: H. K. Lewis: 1883.

ONE of the notable things in this book is, that the author thinks that it is necessary to make an apology for writing it. Fortunately



the book is much better than the apology. Dr Hammond is apprehensive that the objection may be made, that, not being the superintendent of a lunatic asylum, he has no business to set up as an authority on insanity; and after stating some of his claims, the justice of which we seek not to deny, the learned professor adds, to use his own words, "Though I cannot claim to have seen so many cases of insanity as the average superintendent of an asylum with its thousand inmates, I do claim that a single case thoroughly studied is worth more as a lesson than a hundred that are simply looked at, and often from afar off. The medical student who dissects one human body is likely to learn more of anatomy than the janitor who sees hundreds of corpses brought to the dissecting-room." It is needless to point out the fallacy of the analogy where the superintendent of an asylum is compared to the janitor, who has neither opportunity nor stimulus to make a scientific examination of the anatomy of the bodies that are borne past for the use of the students. In fact, to commence with his faults, Dr Hammond is sometimes rash in attack; and as we do not think it just to indulge in vague censure, we shall give a few examples of this failing later on.

Of the 756 pages which comprise the text of the book, 261 are occupied by what he calls the physiology of the mind. In this part the learned author gives his views on the nature and seat of the mind, and the mental and physical conditions inherent in the individual which influence its action. He then treats of instinct and the nature of sleep and dreams. Dr Hammond makes no secret of his views on the nature of mind. "It is a force produced by nervous action. As a galvanic battery evolves galvanism, so the brain evolves mind. If the battery is good, the galvanism is good; if the battery is bad, the galvanism is bad. If the gas is good, we get a good light; if the gas is bad, we get a bad light. And if the brain is good, the mind will certainly be good; and if the brain is bad, the mind will just as surely be bad."

The chapter on instinct shows extensive reading, careful and acute observation, with great power of thought. We do not remember to have read anything better of the kind, though now and then there are questionable statements, like the following:—"I have seen an infant a year old shudder with disgust at the sight of a hair in its porridge. The universal use of the right hand in preference to the left is evidently the result of education and habit continued through centuries, and leading to the increased development of the left side of the brain over the right." This story of the American baby showing at so early a stage the innate refinement of its ancestors reminds us of Hans Andersen's story of the lady who was proved to be a real princess by feeling uncomfortable from a pea lying under twenty feather beds. If Dr Hammond has preserved the hair, he might put it in the same museum as the pea. As for his explanation of the use of the



right hand, it is, of course, incomplete till he tells us the reason why education and habit united through centuries to discourage the use of the left hand, till the left side of the brain had become the heaviest.

Having occasion to quote the observations of Mr Crochley Clapham, who found the average brain weight of eleven Chinese males, drowned during a typhoon in Hongkong, to be 50·45 ounces, or about 1430 grammes, Dr Hammond remarks, "These results are so different from what might have been expected, that we may reasonably suppose a source of error to have existed." Crochley Clapham has perhaps made more extensive and varied weighings of brains than any one living, and his observations are not to be thus put aside to favour Dr Hammond's theories. Though not dealing directly with insanity, it is not likely that these introductory pages will be passed over unread. They give evidence everywhere of the powerful mind of the writer.

The portion of the book which deals with insanity proper (comprising 495 pages), is shorter than most text-books on the subject.

Dr Hammond commences by observing that "every medical witness who appears in a case involving the mental capacity or responsibility of an individual is expected to give a definition of insanity." We are sorry to hear this. We cannot remember of any medical practitioner in this country being asked in the witness-box to give a definition of insanity, and we do not think he could be obliged to do so, any more than to give a definition of law or justice. If hard pressed, we should advise the medical witness to say that insanity is a generalization which does not exist out of the human mind, and must vary with the observations from which it has been generalized, but that insane people do exist, and that he is willing to give his opinion whether the person in question is insane or not. Dr Hammond freely criticises the different definitions of insanity which have been proposed by medical writers. "Dr Bucknill," he tells us, "defines it to be a condition of the mind in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts, has separately or jointly been produced by disease." To this Dr Hammond objects, "According to this definition, the individual who is comatose from the effects of a cerebral hæmorrhage or a blow on the head, and who certainly has 'a defective power of the will' produced by disease, is insane." But surely it is difficult to overlook the distinction between a defective power of the will and the complete suspension of volition, and all the other mental faculties in profound stupor. Dr Hammond's own definition of insanity is certainly a very good one,—“A manifestation of disease of the brain, characterized by a general or partial derangement of one or more faculties of the mind, and in which, while consciousness is not abolished, mental freedom is weakened, perverted, or destroyed.”

It would be easy to make grave objections to Dr Hammond's classification of insanity, but this remark holds good of all classifications as yet attempted. He commences by treating of the simple derangements of the different faculties into which the mind has been generally divided by psychologists. We have perceptual insanities, comprising illusions and hallucinations, then intellectual monomania, reasoning mania, and intellectual morbid impulses; then we have the emotional insanities, including emotional monomania, and the melancholias and hysterias; and, fourthly, the volitional insanities, forms characterized by the derangement of the will. He admits that such derangements of a single mental faculty are rare. There are few, if any, forms classed under the head of intellectual insanities which do not also show emotional disturbance, and perhaps not a single one of the forms which are designated as emotional insanities which are not marked by intellectual derangement; but he classifies his cases from their most prominent characteristics. Thus far the division, though somewhat arbitrary, has gone on one basis. But the fifth section brings us to compound insanities, "forms in which two or more categories of mental faculties are markedly involved." Under this head we find acute mania, circular insanity, katatonia, primary and secondary dementia, senile dementia, and general paralysis. Here Dr Hammond bids farewell to derangements of the mental faculties, and introduces us to the constitutional insanities, "forms which are the result of a pre-existing physiological or pathological condition, or of some specific morbid influence affecting the system." These comprise epileptic, puerperal, pellagrous, and choreic insanities. Then we have arrest of mental development, comprising idiocy and cretinism. The chapter on reasoning mania well displays Dr Hammond's knowledge of human nature, his somewhat cynical humour, and his happy choice of words. His instances, which are always striking, are drawn from a great variety of sources—sometimes from books and periodicals in many languages, sometimes from the newspapers, and sometimes from his own large and varied experience. As might be expected, Dr Hammond shows a great acquaintance with those initial derangements of the intellect or feelings which sometimes subside after a time, or never arrive at such an outrageous stage as to demand confinement in an asylum. We refer to such affections as neurasthenia, agoraphobia, and mysophobia, which have been little studied in this country. The chapter on aboulomania, or paralysis of the will, is very striking. Take the following case, given by Dr Hammond, in which "there was an inability to exert the will solely in the matters of dressing and undressing himself. He would go to his bedroom, but as soon as he began to consider the subject of undressing, his indecision was shown. He would, after standing some time thinking of the subject, sit down and begin to unlace one of his shoes. Then the question would arise whether he had not better take off the other



one first. After cogitating over this point for several minutes, he would begin with the other shoe; but then again doubts would arise, and he would stop. Perhaps then he would rise and walk up and down the floor, deliberating over the question, when, looking towards the glass, he would see himself reflected, and his eyes would catch sight of his necktie. 'Ah,' he would say to himself, 'of course that is the thing to take off first.' But as soon as he took hold of it he hesitated, and the moment he hesitated he was powerless. And so it went on, if he was left to himself, till it has frequently happened that daylight would find him still with every stitch of clothing on him. In the morning it was the same thing in putting on his clothes. He could never determine which stocking should go on first, or whether his shirt should be put on before his stockings, or even whether the right or left leg of his drawers or trousers should have the preference. This gentleman," adds Dr Hammond, "suffered severely from insomnia and occasional headache, but there was no mental aberration other than that of his will."

Our author has filled 534 pages before he arrives at the compound insanities, and these well-known clinical forms, commencing with acute mania and ending with choreic insanity, the last of the divisions of constitutional insanity, are all discussed in 117 pages. Though we should have counselled Dr Hammond to adopt a different scale, we cannot deny that he now makes the most of his space. No part of the subject escapes his notice; everywhere he presents new views and new facts. His definitions are concise, clear, and vivid, and his cases are always striking, perhaps too much so to be typical. We think that the learned author has made a mistake in treating of the prognosis of the different forms of insanity in a separate chapter, instead of giving the prognosis at the end of each of his forms. This is, no doubt, in part due to the nature of his classifications, and it is possible enough that in writing this chapter he may have had a glimpse of its inconvenience. The prognosis as affecting life is given in separate pages from the prognosis as affecting reason; and both prognoses are often stated in so vague and general a form that they can be of little instruction to the reader. The treatment is also dealt with in a separate chapter. Dr Hammond here shows that command of the resources of therapeutics which he has already shown in his book on the diseases of the nervous system. Perhaps it would be sometimes difficult for an inexperienced practitioner to pick out from his pages the most appropriate remedies for a particular case. He has very little to say about the use of electrical currents passed through the brain. He says nothing about the interrupted current or general faradization, and contents himself with quoting a paper of Dr Clifford Allbutt on the good results derivable from the continuous current in some forms of insanity. In his own hands, Dr Hammond tells us, electricity had not been



productive of any marked benefit until the recent improvements in the construction of statical or franklinic electricity has enabled him to employ it as a counter-irritant capable of making a very rapid and decided impression on the system. "In cases of mental derangement coming under the class of emotional insanities, and in primary and secondary dementia," he tells us that "it is of decided benefit. I place the patients on the insulated stool, and draw long sparks from the whole length of the spine. They very generally express themselves as feeling better, and they are perfectly willing to have the operation repeated." We hope that further experience will prove this method of treatment to be as beneficial as it is striking.

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*Practical Pathology: a Manual for Students and Practitioners.*

By G. SIMS WOODHEAD, M.D., F.R.C.P.E. Edinburgh: Young J. Pentland.

THIS is a handbook from the pen of the assistant to the Professor of Pathology in the University of Edinburgh, for use, we presume, mainly at least, in the laboratory under his especial care; but although this may be its chief object, the work is so full of information as to the methods of preparing and examining tissues, and of their appearances when diseased, that it will be found more than useful to any one who may be desirous of studying this branch of medical science while at a distance, perhaps, from any laboratory where assistance might be obtained.

The first chapter is devoted, and very properly so, to an account of the proper method of conducting a post-mortem examination, and, we think, without omitting mention of any organ or cavity in the body, the whole being based upon the well-known system of examination as taught by Virchow.

In the second chapter we have a detailed and careful description of the apparatus employed in the prosecution of pathological histology, commencing with a short account of the form of microscope best suited, in the mind of the author, for this purpose.

He then passes on to the description of the many processes in vogue for the examination of the various tissues, both in the fresh and prepared states, and gives a full, excellent, and easily comprehended account of those hardening and preserving materials which are held in highest repute after long experience, and also of the various injection and staining fluids, with the methods of their preparation.

It is almost needless to say that until this subject is mastered the pathologist is quite unable to prosecute his studies in microscopic anatomy with advantage to himself or others—indeed, in many cases quite the reverse.

Next commences the special study of the various organs and

tissues of the body in their multifarious diseased conditions. The different organs are treated of one by one, a chapter being devoted to each, and the consideration of their morbid conditions is preceded by a short account of their normal structure and histology,—their macroscopical appearances being described before their microscopical structure.

Now and again clinical points are touched upon; *e.g.*, in speaking of cirrhosis of the liver, three forms are described, viz., common C., biliary or monolobar C., and syphilitic C. The two former are properly described as being of different nature and origin, and practically the chief points to bear in mind are that the bile-ducts are much involved in the second, but not in the former, while the portal veins are not involved in the second, but especially so in the first; and in consequence ascites is its common accompaniment, while jaundice is most frequent in connexion with the biliary form of cirrhosis.

The chapter on tumours is especially good and admirably illustrated; the two final chapters of the book being devoted to parasites, animal and vegetable.

There are many points upon which we might touch, but, on the whole, only to speak favourably of, so prefer to say little, and leave the book to the consideration of the many who will doubtless become its possessors.

The work is beautifully illustrated throughout with one hundred and thirty-six most artistically and correctly drawn and coloured drawings, made from preparations most of which are in the possession of the author. The part of the work in which, in our opinion, they fall most short is in the chapters on the lung and kidneys, and in another edition some additions there would not be amiss. On the whole, we can thoroughly recommend the book, although occasionally some of the subjects considered are perhaps done in a rather sketchy manner, and the author has evidently been now and again a little pushed for time.

We do, however, find fault with the lettering of a few of the drawings, especially in the case of those representing sections which have been stained with picro-carmin, and where they are printed in the same colour, being very indistinct, and more so in gaslight than in daylight, sometimes requiring the eyes to be strained even to a painful degree before being able to pick out the letter sought for. In a few cases some of the letters appertaining to the drawings are absent, and in two cases at least the wrong numbers of the latter are given in the letterpress.

The printer has done his work exceedingly well, and the book is nicely got up.

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*The Physiological Factor in Diagnosis: a Work for Young Practitioners.* By J. MILNER FOTHERGILL, M.D. London: Baillière, Tindall, & Cox. Pp. 256.

THIS, an exceedingly clever and well-written book, containing the gist of a good deal of the former works by Dr Fothergill on diagnosis, is put together in a very plain, practical, and taking way.

It is a protest, and not unrequired in the present day, against the too prevalent scientific method which even our best men get in hospital. They are apt to look at the disease discovered by instruments of precision as an entity, to be treated according to rule, and they are too apt to forget or omit consideration of the "personal equation" of the patient, his constitution, moral nature, surroundings, etc. Hints on these subjects are given, and interspersed are many shrewd, witty pieces of advice as to a young practitioner's methods, his behaviour in the sick-room, relations to attendants, relatives, nurses, and to the patient himself. The keynote on this side is struck in the following very sensible sentence:—"The successful man is the man who knows human nature as well as his profession, who can estimate what is going on in the minds of others, as well as be conscious of the workings of his own mind." (P. 225.)

Few books of its kind could be more useful to a young practitioner than this one, if studied carefully and intelligently.

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*Lectures on the Localization of Cerebral and Spinal Diseases.* By Professor J. M. CHARCOT. London: New Sydenham Society: 1883.

PROFESSOR CHARCOT, in his introductory preface, tells us that the object he had before him, in delivering these lectures, was to furnish an introductory chapter to the clinical study of cerebral and spinal diseases. It may at once be stated that he has most admirably succeeded.

A few years ago the subject of cerebral localization was scarcely touched upon in medical treatises; and although our knowledge of the subject is still far from complete, nevertheless much has been done to elucidate the question, by the experiments on living animals of Fritz and Hitzig, Carville and Duret, abroad, and Ferrier in our own country. The results of their experiments has been in part corroborated by the clinical and post-mortem examinations of MM. Charcot, Vulpian, and Pitres, and Drs Gowers and Hughlings Jackson, and other observers. But, for any one but the specialist, the study of all the writings of the



above mentioned and other authors would be impossible; hence the general practitioner is, as a rule, but slightly or not at all acquainted with the subject. However, if the excuse has been in time past that there was no clear, concise, and definite work upon cerebral and spinal localization, that excuse cannot be said to exist any longer.

Professor Charcot has given us a *résumé* of the writings of others upon this difficult question, corroborated and in some instances modified by the large and invaluable experience with which the splendid material of the Salpêtrière furnishes him, and has put all that he has to say into so lucid a form as to render his lectures intensely interesting. Great praise is due to the translator, who has most faithfully reproduced the original; and any reader who has been privileged to follow Professor Charcot's course of lectures at the Salpêtrière will at once recognise the peculiar flowing conversational style in which he addresses his audience, and will experience the charm of, in spirit, listening to that great clinical teacher once more. Material aid is afforded by numerous diagrams and figures. Space would not admit of aught but a slight sketch of the book.

Beginning by giving a short but clear account of the external configuration of the brain, M. Charcot goes on to give a few of the histological characteristics of the nervous system, drawing particular attention to the analogy which exists between the motor cells of the anterior cornua of the spinal cord and the large cells found in the psychomotor regions of the cerebrum.

The chapter on the arterial circulation of the cerebrum is particularly full, a fulness which the professor shows is amply justified by the important part the arterial system plays in the domain of cerebral pathology. It is obvious that in order to have a clear understanding of the effect of an embolus or thrombus of any branch of the different cerebral arteries, it is necessary to possess a knowledge not only of the distribution of the cortical and cerebral vessels, and of their origin, but also of their relation to one another as regards anastomosis. All this is most fully and explicitly entered into, and a very clear description is given of the effects of interference in the vascular supply of the central ganglionic masses and the neighbouring internal capsule, whether it be by hæmorrhage or otherwise. The primary symptoms and secondary results are all well laid down, and the differential diagnosis between lesions affecting different parts is minutely and clearly stated.

Of special interest are the remarks upon lateral hemiopia as the result of lesions affecting directly or indirectly the optic tracts, whereas the deeper-placed lesions affecting the optic nerve-fibres in their intra-cerebral course, instead of producing lateral hemiopia, as is frequently stated, cause, according to M. Charcot, crossed amblyopia. This he accounts for hypothetically by supposing

that the nerve-fibres which do not decussate in the optic chiasma do so beyond the corpora geniculata, probably in the corpora quadrigemina.

The second part of the book is composed of lectures delivered in 1880, those in Part I. dating from 1876. Spinal localizations form the subject for consideration; and although M. Charcot recapitulates more than in Part I., and is more discursive, he nevertheless succeeds in making his exposition clear and easily comprehensible. Beginning with the developmental anatomy of the cord and brain, M. Charcot shows from it and from pathological anatomy that the pyramidal tracts are two complete systems of continuous fibres, whose course may be traced from the gray matter covering the ascending frontal and ascending parietal convolutions, through the centrum ovale, the anterior two-thirds of that part of the internal capsule situated immediately behind the part known as the knee, to the inner third of the under surface of the cerebral peduncles, and thence through the pons to the anterior bulbar pyramids, where each tract usually divides into two parts, one continuing down each side of the anterior fissure of the cord, and forming thus Türck's columns, whilst the larger number of fibres decussate and pass down the posterior part of the antero-lateral columns. It is next shown that motor impulses invariably follow the course of the pyramidal tracts, and how a destructive lesion in any part of their course is the only cause which gives rise to a descending secondary degeneration. The semeiology of such degenerations is clearly expounded, and incidentally some valuable hints are given as to the prognosis of hemiplegia.

The subject of contracture is very fully gone into, and it is shown to be closely allied in nature with the tendon reflexes. M. Charcot gives a clear explanation of his view of its nature and causation, as well as of the various spinal affections in which it is usually present. The last chapter of the book is devoted to spinal amyotrophies and localizations in the gray matter, and in the appendix there is a very interesting account of amyotrophic lateral sclerosis, and some clinical observations relating to cases of that somewhat rare disease. In conclusion, we can most heartily recommend this admirable book to the general practitioner, and to the medical student in his last year of study. It will give to its reader a clear understanding of what is known of the subject it professes to treat of. We wish that the Sydenham Society would give us more books concerning the *advances* of the science of medicine; at any rate we are thankful for this one. Works like the one we have been considering are of far more value to the practitioner of to-day than the writings of most deceased masters of our art, although these latter are historically of great interest.



*Hospitals, Infirmarys, and Dispensaries: their Construction, Interior Arrangement, and Management; with descriptions of Existing Institutions and 74 Illustrations.* By F. OPPERT, M.D., M.R.C.P.L. Second (English) Edition, revised and enlarged. London: J. & A. Churchill: 1883.

As it is not likely any one will read Dr Oppert's book who does not seriously desire to obtain information on the subject, it is perhaps no great objection that the style is often slipshod and does not exactly express what the author means to say. We suspect that Dr Oppert is a foreigner who has not mastered the English language. The work was originally written in German, in which form it has passed through two editions. We can, however, recommend the work to those who mean to build an hospital, are building one, or want to alter or improve one. The author has collected a number of useful details about the construction and working of such establishments, which will help to save architects and medical officers from many blunders and oversights, and be a guide to them when they crave information. The author seems to have visited many of the principal hospitals of Europe, and gives much information about their construction, some of which is useful and some superfluous. Of what benefit, for example, is the following information about the hospitals in Genoa or Genova, as Dr Oppert calls it? "The general hospital is called Ospedale Grande: it is a large building constructed around five yards. It is of ancient origin. Another, called Osp. degl' Incurabili, is of less extent and of an irregular shape. As the name implies, it is especially intended for chronic incurable diseases."

It would, of course, be easy to find reasons for disagreeing with the author, as in many cases the expedient which he recommends might not appear preferable to another which he rejects. As far as our opinion goes, his advice is generally sensible, and, considering the extent of the ground which he goes over, it is not surprising that there are occasional omissions. The information about military hospitals is quite rudimentary, and the chapter on asylums for the insane is not sufficiently full to tempt medical superintendents to consult Dr Oppert's book. The work of Dr Kirkbride on the construction of asylums is the authority on this subject. The chapter on ventilation strikes us as especially good; that on disinfection is very meagre. The only agents which he mentions are heat and sulphurous acid; a few directions how to disinfect clothes without injuring their texture or appearance would surely be useful.

A few pages are devoted to an account of the principal hospitals in Scotland, prominent amongst which is the New Royal Infirmary of Edinburgh. Of this building Dr Oppert remarks, "There are a great many inlets for fresh air and outlets for vitiated air; but there is some doubt whether the desired effect will be obtained."



Surely, in a book published this year, we might expect not to be left in doubt whether the ventilation of the hospital at Edinburgh has proved successful, as we believe it has.

We do not know why the hospitals at Montrose and Arbroath should be mentioned, while the larger ones at Perth and Dumfries are omitted. On the whole, leaving petty faults alone, this book is worthy of praise, the result of much labour, thought, and travel, and full of trustworthy information, which it would be difficult to collect from any other sources.

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## Part Third.

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### MEETINGS OF SOCIETIES.

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#### MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

##### SESSION LXIII.—MEETING I.

*Wednesday, 7th November 1883.*—Dr G. W. BALFOUR, *President, in the Chair.*

##### I. ELECTION OF OFFICE-BEARERS.

THE following gentlemen were elected office-bearers for session 1883-84:—*President*, Henry D. Littlejohn, M.D., F.R.C.S. Ed.; *Vice-Presidents*, Professor Thomas R. Fraser, M.D., F.R.C.P. Ed.; David Wilson, M.D., F.R.C.S. Ed.; J. Batty Tuke, M.D., F.R.C.P. Ed.; *Treasurer*, Alexander G. Miller, F.R.C.S. Ed., 11 Walker Street; *Secretaries*, C. Watson MacGillivray, M.D., F.R.C.S. Ed., 11 Rutland Street; Alexander James, M.D., F.R.C.P. Ed., 11 Albyn Place; *Editor of Transactions*, William Craig, M.D., F.R.C.S. Ed.; *Members of Council*, P. Heron Watson, M.D., F.R.C.S. Ed.; Byrom Bramwell, M.D., F.R.C.P. Ed.; John B. Buist, M.D., F.R.C.P. Ed.; T. R. Ronaldson, M.B., F.R.C.P. Ed.; George Hunter, M.D., F.R.C.S. Ed., Linlithgow; James Jamieson, M.D., F.R.C.S. Ed.; J. Graham Brown, M.D., F.R.C.P. Ed.; J. M. Cotterill, M.B., F.R.C.S. Ed.

##### II. ELECTION OF NEW MEMBERS.

The following gentlemen were elected Ordinary Members:—J. Lyon Wilson, L.R.C.P. Ed., Edinburgh, and Donald MacRaid, F.R.C.S. Ed., Greenock.

##### III. EXHIBITION OF PATIENTS.

1 and 2. *Mr A. G. Miller* showed (a.) A CASE OF PLASTIC OPERATION FOR CONTRACTION OF THE ARM AFTER BURN. The patient was a little girl, who had been brought into hospital in July, suffering from contraction of the forearm and fixation of the elbow-joint, there being hardly any movement of the arm The

operation adopted was transverse section of the cicatrix. The tendon of the biceps was also severed, when the arm became straight, showing that the elbow-joint was in good condition. To fill up the gap caused by the division of the cicatrix, Mr Miller determined to take a lozenge-shaped flap from the side of the chest. One-half of this flap was accordingly dissected up and attached to the arm, which was fixed to the side of the chest in an almost straight position by means of straps of adhesive plaster. This was done on the 13th of July. On the 23rd the flap was dissected a little further off the side of the chest, to give more relaxation and to make the arm straighter. Later on, during Mr Miller's absence in the country, Dr Maclaren removed the rest of the flap, completing the operation. Two months elapsed between the first and last operations. The vitality of the flap had been proved by an attack of erysipelas, which had occurred after the completion of the operation. The arm was not absolutely straight, but the movement was now very free. (b.) A CASE OF MULTIPLE CONGENITAL TUMOURS OF THE FOREARMS AND LEGS. The patient, an unmarried man, æt. 42, had a number of these tumours, more particularly on the left arm. Five were situated along the line of the outer edge of the left ulna, and two near to the left internal condyle. There were two near the olecranon of the right arm, and also one on the front of the right tibia, and two close to the head of the left fibula. The tumours of the arms were quite separable from the skin and mobile over the bone. The tumour in front of the tibia seemed to have some connexion with, or to be adherent to the periosteum, while the two close to the head of the fibula were slightly adherent to the skin. The history was peculiar, patient stating that he had had lumps of the same kind since ever he could remember, but varying in number and size, and never giving pain or inconvenience. On one occasion he pressed some white (sebaceous?) matter out of one of them. When admitted to hospital he was suffering from a pustulo-crustaceous eruption, which had begun to improve. Mr Miller was at a loss to explain the exact nature of these tumours. He was not aware of having ever seen or read of anything like them. They had nothing to do with the skin. They were, every one of them, near to or in the line of some bone, and some of them were apparently moored to the periosteum. The case was not one of molluscum fibrosum, nor did he believe the tumours to be sebaceous, though one had the history of some white matter being squeezed out of it. They were not gummata. Some of them felt like fibromata; others were as hard as cartilage. The greatest difficulty in settling their structure was due to the fact that they had diminished in size under the administration of potassium iodide (gr. xx. thrice daily). There was also the statement of the patient that the tumours varied in number, size, and firmness, and had always done so since first he noticed them in childhood. The best

solution of the difficulty would be to cut one out, but to this the patient objected.

#### IV. EXHIBITION OF PHARMACEUTICAL SPECIMENS.

*Dr W. Craig* showed a COLLECTION OF NEW AND RARE DRUGS which had been sent him by Messrs Parke, Davies, & Co. of America. The collection consisted of 28 specimens of drugs of vegetable origin, all of them interesting and important; none of them as yet officinal in our British Pharmacopœia, but several were already officinal in the pharmacopœia of the United States of America, and many of them would undoubtedly become officinal in all pharmacopœias.

Nine of the specimens consisted of leaves of plants:—

1. *Boldo*, whose leaves contain an essential oil, and are used as a nervous stimulant, and are especially useful in chronic affections of the liver. They have been used in this country, more or less, for some years.

2. *Eucalyptus globulus*, the blue gum tree of Australia. These leaves contain an essential oil and are powerfully antiseptic, and the trees are specially useful as a preventive of fever, when planted in malarious districts.

3. *Coca*.—These are the leaves of *Erythroxylon coca*, believed by some to contain them, and are useful as a nervous stimulant and as an antitripitic.

4. *Arctostaphylos glauca*.—These leaves are officinal in the United States Pharmacopœia, are used as a tonic and diuretic, and have been recommended for diarrhœa and gonorrhœa.

5. *Yerba santa*, "Holy Herb," the leaves of *Erioduction glutinosum*. Its properties are supposed due to a gum-resin, are much used by the natives of Mexico, are good in gonorrhœa, and specially useful in cystitis.

6. *Caroba*, the leaves of *Jacaranda caroba*, a Brazilian plant belonging to the *Bignoniaceæ*, much recommended for syphilis.

7. *Damiana*, the leaves of *Turnera aphrodisiaca*, a native of Mexico, used as a tonic to the generative organs.

8. *Chekan*, the leaves of *Myrtus chekan*, a native of Chili, used as a tonic, expectorant, and diuretic, and said to be specially good in chronic bronchitis.

9. *Lippia mexicana*, a plant belonging to the *Verbenaceæ*, a useful stimulant expectorant, and said to be exceedingly valuable for colds, both in the acute and chronic stages.

Two specimens consisted of flowering tops:—

1. *Grindelia robusta* (wild sunflower), used for asthma, and said to be antagonistic to the poison of rhus.

2. *Grindelia squarrosa* (ague-weed), used for asthma and bronchitis, and said to be specially good in whooping-cough, and, above all, for enlargement of the spleen and for ague.

Seven specimens consisted of flowering herbs:—

1. *Oenothera biennis* (evening primrose), a well-known plant in



cultivation, said to be useful in asthma and dyspnœa, and in gastric irritability.

2. *Gentiana quinqueflora* (bilious weed). It has the properties characteristic of the order, an excellent tonic and hepatic stimulant, and is a powerful antiperiodic, and is much used by the Indians for fevers.

3. *Sabbatia Elliottii* (quinine flower), a native of Florida, a plant belonging to the *Gentianaceæ*, and possessed of tonic and anti-periodic properties, used in fevers.

4. *Frankenia grandiflora* (*Yerba reuma*), possessed of antiseptic properties, used for chronic catarrh and subacute inflammation of the throat, for ophthalmia, for discharges from mucous membranes generally, and for snuffing up the nostrils for fetid discharges from the nasal mucous membrane.

5. *Asclepias currasavica* (blood-flower), so called from its power of arresting bleeding; used for worms; for bleeding it is used both internally and externally, and has been found very beneficial for gonorrhœa and gleet.

6. *Artemesia frigida*.—This has been highly recommended as a febrifuge and as a very good substitute for quinine.

7. *Urechites suberecta* (Jamaica nightshade), a powerful poison. This plant is a powerful depressor of the heart, and has actions not altogether unlike those of aconite. It is not as yet used as a medicine.

There are six specimens of barks:—

1. *Quebracho*, a bark somewhat resembling that of red cinchona, used for diarrhœa, asthma, and general dyspnœa.

2. *Cascara amarga*, a plant belonging to the quassia family, used as a tonic and anti-syphilitic.

3. *Viburnum prunifolium* (black haw), a powerful astringent for loss of blood, and a teaspoonful of the fluid extract every two or three hours is said to be most efficacious in preventing abortion.

4. *Hoang-Nan*, the bark of *Strychnos guatheriana*, a twining plant. Its bark resembles very closely the bark of the *Strychnos nux vomica*, false angustura bark. It is a native of Southern India, and contains both strychnia and brucia, the latter predominating. It is used in leprosy and for rabies.

5. *Piscidia erythrina* (Jamaica dogwood), a tree belonging to the *Leguminosæ*. It is the bark of the root that is used. It has long been used for assisting to catch fish by stupefying them. It is used medicinally as an anodyne and soporific, especially as a substitute for opium.

6. *Rhamnus purshiana* (*Cascara sagrada*, sacred bark), a medicine destined soon to be officinal in all pharmacopœias. It is one of the most efficient remedies for habitual constipation, and the cascara cordial of Parke, Davies, & Co. is at once pleasant to take and a very valuable medicine for habitual constipation.

Of roots there are four specimens:—

1. *Berberis aquifolium*, said to be a very powerful tonic.

2. *Franciscea uniflora* (manaca), a plant belonging to the *Scrophulariaceæ*, a native of Brazil, sometimes called *Mercurio-vegetal*. It is said to stimulate the lymphatics, and so eliminates morbid products from the system. It is used for rheumatism.

3. *Piper methysticum* (kava-kava), used in the Sandwich Islands for producing an intoxicating drink. It contains an acrid resin and a volatile oil. It has been recommended for gonorrhœa, gout, etc.

4. *Sarracenia flava*, one of the pitcher-plants, is a very powerful astringent, and specially good in diarrhœa.

These specimens are beautifully prepared, excellently labelled, and it is hoped that their virtues will be extensively experienced also on this side of the Atlantic.

#### V. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Dr W. Craig* showed a pathological specimen illustrating the rare malformation of the RECTUM ENDING IN THE MEMBRANOUS PORTION OF THE URETHRA, which will form the subject of a future communication to the Society.

2 and 3. *Dr C. W. MacGillivray* showed (a.) THREE SPECIMENS OF CALCULI. The first of these was a uric acid stone, coated with phosphates, from the bladder of an old man. The specimen was interesting from the fact that the patient had been unsuccessfully sounded several times with a short-beaked sound. It was discovered accidentally one day on the introduction of a catheter with a wide curve. The second specimen was a series of small uric acid calculi with facets, from the prostate of an old man who having stricture, had suffered twice from extravasation of urine. They were removed by the median operation. The third was a uric acid calculus from the prostate of a man who had had trouble with his urine ever since he had suffered an injury to his perineum when fifteen years of age. When admitted to hospital he was suffering from perineal abscess. When this was opened, a quantity of fetid pus escaped. The finger, passed into the abscess cavity, found the calculus fixed in the prostate. A gush of water followed on its removal. The perineal abscess had unfortunately burst the pelvic fascia before it was laid open, and the patient died. (b.) A DEGENERATED OVARY AND FALLOPIAN TUBE, REMOVED FROM AN INGUINAL HERNIA. The patient was a girl about 20, who suffered from a swelling in the left inguinal region about the size of a small orange. Becoming larger it interfered with her going about. The diagnosis was either a cystic disease of the round ligament, or hernia of ovary or Fallopian tube. As it could not be reduced it was cut down upon, and was found to contain a degenerated ovary and Fallopian tube. They were removed and the wound closed. The girl made a good recovery, There was no disturbance of menstruation before or since the operation.



4. *Dr A. Balfour* of Portobello showed a HALFPENNY that had lain in a boy's stomach from 1st January to the 28th October of the present year. There were no symptoms of its presence from the time it was swallowed till it was ejected during vomiting.

5. *Dr P. H. Watson* showed three specimens of CALCULI. (a.) A uric acid calculus from the bladder of a gentleman æt. 75, on whom he had performed lithotritry some ten years previously. On this occasion the patient suffered from such a degree of inflammatory action in the mucous membrane of the bladder that lithotritry must have proved fatal. Lateral lithotomy was performed, and the patient made a good recovery. (b.) An oxalate of lime calculus, coated with crystals of triple phosphate. This patient was aged fifty years. His history appeared to be one of stone from an early period of life. He had been examined by many surgeons, but all had previously failed to discover the existence of the calculus. It was removed by the lateral operation. (c.) Fourteen calculi, also removed by the lateral operation from the bladder of a patient æt. 78, who had been under the care of several specialists in London. He came to Dr Watson for stricture, but the inflammatory reaction was more than could be accounted for by the stricture. The sound showed that there was at least one large calculus, but when the operation was performed fourteen were removed.

6. *The President* exhibited a PHOTOGRAPH OF A LIGHTNING PRINT from the arm of a boy who had been struck by lightning near Duns on the 16th of June last. He also showed the terminal branch of an isolated yew tree, which grew about 70 yards from where the boys were, and had been struck at the same time. Several large yew trees, also growing in the neighbourhood, had much of their foliage scorched; no other plant was injured. Such lightning prints were well known, and had often been taken to be impressions of shrubs or trees growing near those struck. In this instance the yew branch exhibited had been supposed to be the object represented. A writer in the *Photographic News* of 6th July had rightly enough stated that it cannot be a photograph, as it is a *positive* or *dark* picture on a light ground. While, if it had been formed according to the chemical and optical laws essential to the production of the photographic shadow of a tree, the picture would have been negative, that is, *light* upon a *dark* ground. In all probability the markings developed on the arms and necks of the boys were due to the direct action of the electric fluid paralyzing the vessels and causing temporary congestion of the capillary vessels. This was the first known instance of a photograph taken from a lightning print. The Society had to thank Dr Watson Campbell of Duns for this opportunity of seeing it, as well as for the following most interesting account of the accident:—"A violent thunderstorm passed over Duns on the 16th of June last, reaching its climax about 11 A.M. Just before that hour four boys took



shelter in a stable at Cairnbank, half a mile from the town. A very vivid flash, followed instantaneously by a terrific peal of thunder, startled the neighbourhood. Immediately the gardener heard some one in the stable calling out "Murder! murder!" and on going thither he found two boys quite unconscious (one apparently dead), and other two stupid and alarmed. One of them was calling "Murder;" the other had been driven through the open door across the road, and was in the act of crawling back. They were taken to the gardener's house, where the worst case vomited, and all soon became conscious. One said he could not feel his legs; another said his arms were cut off; and all were found, when taken home and undressed, to be strangely marked, and a burning feeling remained in these marks after all other peculiar sensations had gone. The marks were of a bright pink colour, and looked like accurate representations of some small-leaved plant or shrub. I saw two of the boys; there was one mark over the ball of the right shoulder exactly like a terminal twig; on the left arm, from shoulder to elbow, there was a markedly arborescent mark (*vide*



woodcut from photograph taken four and a half hours after the accident).<sup>1</sup> A similar mark was found on the other boy extending

<sup>1</sup> We have to acknowledge the courtesy of the Editor of the *Lancet* in favouring us with the use of this woodcut.

down the inside of the right arm from axilla to shoulder joint, and for five or six inches down the side of the body. The mark entirely disappeared during the night. Only one of the boys said he saw "a ball of blue fire" before becoming unconscious. Two say they smelt sulphur when returning to consciousness. None of their clothing was singed even in the slightest degree."

VI. THE PRESIDENT'S VALEDICTORY ADDRESS, which appears at page 489 of this Journal.

*Dr P. H. Watson* moved a vote of thanks to the President for his most able and interesting address. He was sure he expressed the feeling of every member of the Society when he said how much gratified they had been by an address which gave a most interesting *résumé* of two great advances in the practice of the profession which had been made within the recollection of most of the older members. It used to be the duty of the mover of a vote of thanks to the retiring President for his address and conduct in the chair to request that the address be printed. Now, however, thanks to the energy of *Dr Craig*, that duty was no longer required. Their Transactions being printed, they would have an opportunity of giving the address the leisurely study it would so well repay.

*Mr Joseph Bell* seconded. He claimed the privilege of doing so because of the fact that he had once been bled from the arm *secundum artem*.

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## Part Fourth.

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### PERISCOPE.

#### MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By *ANGUS MACDONALD, M.D.*

MEETING OF THE AMERICAN GYNÆCOLOGICAL SOCIETY (abstracted from accounts in *American Journal of Obstetrics*, Oct. 1883, and *Boston Med. and Surg. Journal*, Sept. 27, 1883).—The eighth annual meeting of the above Society was held in Philadelphia on September 18, 19, and 20, when the following papers were read:—

"Superinvolution of the Uterus," by *Dr Johnson* of Baltimore. —After reviewing the history and literature of the subject, he submitted that the term should be limited to a condition of excessive involution occurring after the uterus has been emptied of some mass, normal or abnormal, which had distended it beyond its ordinary capacity, as in hydrometra, pyometra, hydatids, fibroid or other tumours, dropsy of the amnion, or after ordinary gestation or abortion. He related four cases, in none of which he had been able to do much good, and concluded by reviewing the pathology

of the process. In the discussion Dr Fordyce Barker gave it as his opinion that treatment in such cases was useless unless there were signs of remaining ovarian activity. In this he was supported by all the other speakers, Dr Battey characterizing the remark as weighty and important.

"The Importance of Cleanliness in Surgical Operations," by Dr Sutton of Pittsburg.—In this paper the writer gave the results of his observations during a lengthened stay in Europe, and dwelt on the relationships of Listerism to cleanliness. In the discussion Dr Emmett remarked that he had for a long time been trusting more to soap and water than to disinfectants; and he stated that the death-warrant of the patient is often carried under the finger-nail of the surgeon.

"Hot Water in Secondary Hæmorrhage after Pelvic Operations," by Dr Albert H. Smith of Philadelphia.—The writer stated that he regarded hot water at a temperature of 115° F. to 120° F. as an efficient hæmostatic, not only in obstetric practice, but also after surgical operations. He employed it regularly after every case of labour (slightly tincturing it with some form of antiseptic) in order to obviate hæmorrhage, and continued the irrigation until the water came away perfectly clear. He called attention to the use of this agent in plastic operations, even where bleeding occurs from moderately large vessels; and he referred to a case where violent secondary hæmorrhage, after a perinæum operation, was checked by its means. He directed attention, in conclusion, to three points—1. The great advantage of this agent over all others for arresting secondary hæmorrhage after pelvic operations; 2. Its efficiency when it is carried to the bleeding surface; and 3. Its simplicity and convenience of application. In the subsequent discussion the members agreed with the author. Dr Goodell suggested the addition of vinegar to the hot water.

"Some Points connected with the Subject of Dysmenorrhœa," by Dr Palmer of Cincinnati.—In this paper, and in the discussion which followed, there was a marked tendency to minimize the importance of "obstruction" as a cause of pain, while at the same time the utility, in many cases, of dilating the cervix by the use of bougies and other means was fully recognised.

"A Rare Form of Abdominal Tumour," by Dr Thaddeus Reamy of Cincinnati.—The histories of three cases of abdominal growth, which on tapping were found to contain blood, were related. The two which were tapped recovered, the third died, and upon examination the tumour was discovered to be a sarcoma of the omentum. Dr Lee advocated tapping as an aid to diagnosis. Dr Sutton did not believe that a diagnosis could be made during life between cancer and sarcoma of the omentum. He would prefer abdominal section for diagnostic purposes. Dr Campbell thought that as such growths are apt to be pedunculated he would advocate their removal, even if they were malignant, and that it is proper to give the



patient the benefit of the operation. Dr Reamy would not approve of the doctrine advocated by Dr Sutton, who claimed that it would be more judicious to open the abdominal cavity than to tap. The hypodermic needle would remove enough fluid for diagnostic purposes, and tapping in at least one case was followed by a return to robust health.

"A Study of the Etiology of Perinæal Laceration, with a New Method for its proper Repair," by Dr T. Addis Emmet of New York.—The writer claimed that laceration of the perinæum does not give rise to the symptoms which have been attributed to it, and that the laceration is never so extensive as it appears. He held that there is no such body in existence as the so-called perineal body, to restore which is supposed to be the object of the operation. The object of the operation really should be to bring up the posterior wall of the vagina in contact with the anterior wall, and prevent ballooning. He dwelt at length on the anatomical relations of the pelvic fascia, and stated it as his opinion that this structure kept the vaginal walls in contact, and that when prolapse of either wall occurred it was due to some lesion of it, and not to the destruction of the perinæum which might accompany it. Hence he did not deem the mere repair of the perinæum as the important part of any operation undertaken for the cure of prolapse. Observation had taught him that the chief support was gained and a permanent result was obtained only by including some part of the posterior wall of the vagina. The description of his operation is too long for transcription. A general discussion followed this paper, but as it was evident that the lecturer and his auditors did not fully understand each other, Dr Emmet begged that they would reserve their judgment until they had an opportunity of reading his paper.

"Accidental Puncture of the Uterus in Laparotomy," by Dr C. C. Lee of New York.—In this paper details of seven reported cases, where the gravid uterus had been injured during the performance of laparotomy, were given, and the writer added a case of his own. From a consideration of these, he concluded, *first*, The pregnant womb may be punctured or otherwise wounded during laparotomy without necessarily causing abortion; *second*, Miscarriage seems, both *a priori* and from clinical evidence, to depend upon injury of the uterine contents, not of the womb itself, however severe; *third*, If the former has certainly occurred, Cæsarean section is indicated, and should be promptly performed. In this case the utmost care must be subsequently taken to secure thorough drainage from the uterine cavity; *fourth*, If the uterine walls alone are injured, the wound is to be treated on general principles. If a deep puncture or incision, it must be sutured with the minutest care, with exact coaptation of the edges. For this purpose fine silk sutures, rendered antiseptic, are the best. If a nick or superficial puncture, it must not be ligated, for ligatures cut quickly through

uterine tissue ; if too small to be sutured, the bleeding points must be lightly touched with the thermo-cautery until oozing has ceased. Dr Byford suggested that when such an accident happened in a case beyond the 7th month of pregnancy, suturing the uterus would be dangerous on account of the liability to tear that would be occasioned by the uterine contractions.

"Is Extirpation of the Cancerous Uterus a justifiable Operation?" by Dr Reeves Jackson of Chicago.—This question the writer answered in the negative, as did also Drs Van de Warker, Emmet, Baker, and Palmer, while Dr Sutton of Pittsburg strongly supported the operation, which he said he had performed five times.

"Menstruation after Extirpation of the Ovaries," by Dr Campbell of Augusta.—The writer explained the occurrence of such cases by the supposition that there was in certain cases at least an endowment of the nervous system, which continued for a while after the organs through which it manifests itself have been removed. Various causes were suggested by the speakers on the paper; the presence of a third ovary—incomplete removal of ovarian tissue—fixed habit—the presence of malignant disease of the uterus.

"Remarks on Chronic Abscess of the Pelvis," by Dr Byford of Chicago.—After considering the usual history and treatment of such cases, the writer summarized as follows:—He looked upon the inner surface of an abscess as similar in structure to an ulcer on the surface of the body, being covered with granulations which produce pus, as in external ulcers. These granulations are sometimes exuberant, sometimes flabby, sometimes large and fungating; they may give rise to healthy pus or unhealthy; in the course of time they may undergo changes and become converted into cicatricial tissue. Serum may be effused into the cyst by endosmosis, and the cells become disintegrated, until the whole contents become serous, and may thus become absorbed, leaving a solid tumour of a cicatricial character. He recommended as an adjunct to opening, in cases of chronic pelvic abscess, the use of a curette to scrape off the exuberant granulations he described.

"Ergot, the Use and Abuse of this Dangerous Drug," by Dr Engelmann.—The writer desired to have the use of ergot restricted absolutely to the non-pregnant uterus. He made this restriction because of the great liability of the drug to do harm when used in the treatment of any condition of the gravid uterus, and also because of the existence of much safer and milder means for attaining any object aimed at by the use of ergot in such circumstances. Dr Albert Smith said that he considered ergot in the practice of obstetrics as an unmitigated evil—that it was always capable of doing harm, and that it generally did harm. Several other speakers advocated the use of ergot, while admitting that it was dangerous if carelessly given.

## MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

**RESORCIN IN A CASE OF EPITHELIOMA.**—Dr Manino, in an article on resorcin, reports a case of epithelioma that he has treated with it. G. P., aged 64, had always enjoyed good health until about four years ago, when he noticed a small growth on his right cheek, about the size of a split pea, which caused a great deal of pain. Continued scalding caused an abrasion of the skin, and on the slightest irritation it would bleed. Cauterization and excision only caused the growth to enlarge to a size of ten centimetres in diameter. The wound had a dark red fungous appearance, with indurated edges, and gave off a profuse thin watery discharge. An ointment of resorcin and vaseline 1-3 was applied two times a day for eight days, when a marked change for the better could be seen; a portion of the wound was beginning to heal over. After two weeks the ointment was weakened a little and the case continued to progress rapidly. In a short time the whole surface was bridged over, and only a red scar remained. The treatment was painless, and far more satisfactory than when caustics are used (*Zeitschrift f. Therap.*)—*Therapeutic Gazette*, Oct. 1883.

**ADONIS VERNALIS.**—This plant has long been used in Russia as a remedy in dropsy. The following in a short *résumé* of Professor Botkin's article on this plant, first published in the *Arch. f. Klin. Med.* After a series of experiments it was discovered that only in certain kinds of dropsy, or rather dropsy due to certain causes, in cases where the œdema was due to a disturbance in the compensation and activity of the heart, the remedy acted very satisfactorily. The heart-beat increases in force after the use of adonis vernalis, and the size of the heart rapidly diminishes; the heart sounds and murmurs, especially the pre-systolic and systolic murmurs in stenosis, are more marked and distinct. The heart rhythm is more regular and somewhat slower; therefore the pulse is slower, and in most cases the pulse wave fuller and stronger. The secretion of urine is markedly increased—a tenfold increase of the watery elements. All deposits disappear, specific gravity diminishes, and the urine has a very pale colour. There is an absolute increase of the chlorates and urates, the body weight diminishes, and the œdema disappears rapidly; the dimensions of the liver decrease, cyanosis and dyspnœa disappear, and respiration becomes full and regular. In the largest number of cases great relief was experienced at the end of the first day; complaints were less frequent, and in the course of a few days they disappeared entirely. Adonis vernalis has a good effect on cases, also, where heart disease is of a secondary nature, following chronic Bright's disease, etc. In cases even where the activity of the kidneys was very low and the



œdema was well marked, it was very seldom that adonis vernalis did not give relief, provided the heart action was diminished and the blood pressure lower than normal. The remedy was administered in the following way:—

R Infus. adon. vernal. (ex. 4·00 ad coll. 200·00)

Ol. menth. pip., gtt. 2

Sig. One teaspoonful every two hours (*Wien. Med. Blätter*).—*The Therapeutic Gazette*, October 1883.

**CELLULOSE AS A DRESSING.**—Dr Fischer of Trieste has made experiments with cellulose as a dressing to wounds, and has found it, when moistened with warm water or some medicated solution and afterwards covered with an impervious fabric, to be a most excellent application in all cases where heat and moisture appear to be indicated. Its chief advantages are—1. It is absolutely free from substances capable of exciting putrefaction. 2. It has a very low specific gravity. 3. It produces neither eczema nor erythema upon the epidermis. 4. It retains moisture and heat perfectly for more than twenty-four hours. 5. It never adheres to granulating wounds on the surface of the skin. 6. It adapts itself perfectly to the outline of the place of application. 7. It is much cheaper than other materials heretofore used for similar purposes. Dr Fischer has used, so far, only plain water or weak solution of carbolic acid or iodoform in the case of suppurating buboes, and has obtained uniformly satisfactory results (*Zeitsch. f. Therap.*)—*New Remedies*, Sept. 1883.

**MENTHOL IN HEADACHES.**—This drug has never failed to relieve my own headache or any nervous headache in my care. I simply wet the finger with the following mixture, and pass it several times over the forehead:—

R Menthol, . . . ʒj.  
 Alcohol, . . . ʒj.  
 Olei caryophylli,  
 Olei cinnam.,      ʒā ℥xx.      M.

In the pains of chronic rheumatism of elbow and knee joints it affords prompt relief, and in my own case of sciatica, rubbed down the groin and thigh it acted like a charm.—Dr F. O. Lockwood, in the *Therapeutic Gazette*, Oct. 1883.

**STIGMATA MAIDIS.**—Dr Dassum was the first to recommend this drug as a specific in catarrhal inflammation of the kidneys and bladder (in his article in the *Union Médicale*). Dr Dassum reports a number of cases treated by himself, where the urine had a strong ammoniacal odour and a dirty-looking precipitate. These symptoms disappeared very rapidly after the employment of the fluid extract, and the cases made a rapid recovery. It was given in 20-drop doses three times daily (*Journal de Méd. de Paris*).—*Therapeutic Gazette*, Oct. 1883.

ON THE REDDENING OF PURE CARBOLIC ACID.—Mr W. Meyke of Warsaw, as the result of experiments, has come to the conclusion that the cause is due to the action of the acid on the bottles containing it. It is due to the *lead* in these glass vessels.—*New Remedies*, Sept. 1883.

### PERISCOPE OF OTOTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

CONTRIBUTIONS TO THE STATISTICS OF EAR DISEASE, by Dr K. Bürkner of Göttingen.—In an elaborate paper of some 23 pages in the *Archiv für Ohrenheilkunde*, extensive and interesting statistics are given of the out-patient clinics of some sixteen to twenty aural surgeons, including Dr Bürkner himself and the late Sir William Wilde. The greater number of the surgeons are German, but there are one or two Americans, Frenchmen, and Italians. Dr Bürkner, in referring to the frequency of diseases of the ear, quotes Von Tröltzsch, who says "that, on an average, out of every three individuals in middle life—say from 20 to 50 years of age—certainly one does not hear well in at least one ear" (*Lehrbuch der Ohrenheilkunde*, page 8, 7th edition, 1881). Dr Bürkner then directs his reader's attention to the investigations by Weil of Stuttgart on 5905 school children, who found in 23·6 per cent. of all who came under observation, objective pathological symptoms of ear disease, and in 32·6 per cent. a diminution of hearing power (*Zeitschrift für Ohrenheilkunde*, by Knapp and Moos, vol. ix. p. 106 and following). After carefully analyzing and summarizing the statistics of the above-mentioned aural surgeons, Dr Bürkner comes to the following general conclusions:—1. The most frequent causes of diseases of the ear would seem to be attacks of cold, affections of the nasal and pharyngeal cavities, and the acute infectious diseases. 2. The liability to diseases of the ear increases from birth until the fortieth year, and decreases from then until old age. 3. Men are more subject to affections of the ear than women, the proportion being about 3:2. 4. The external ear is affected in the ratio of 25 per cent., the middle ear 67 per cent., and the inner ear 8 per cent. of the total number of diseases of the ear. 5. The left ear is more frequently affected than the right, the proportion being about 5:4. 6. The acute affections of the middle ear occur less frequently in summer and autumn than in spring and winter. 7. Of the total number of cases of ear diseases in the out-patient clinics, about 53 per cent. are cured, about 30 per cent. are improved, 7 per cent. remain without improvement, and 0·3 per cent. terminate fatally. The article, which must have occupied much time and given much trouble to prepare, also contains a pretty full statement of the literature of the subject.—*Archiv für Ohrenheilkunde*, Band. xx. p. 81.

## OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

**HERPES PROGENITALIS IN WOMEN.**—Unna acted during four years as official examiner of public prostitutes in Hamburg. The number of these under strict surveillance is about 800, and about 25 per cent. of these suffer annually from herpes progenitalis. On the contrary, the disease is extremely rare in private practice in women. He ascribes the cause, in prostitutes, to excessive congestion of the genital organs, and believes that every herpetic eruption of the variety under consideration depends on a heightened congestion of the pelvic organs. There are men who are attacked by herpes after every act of coition; and there are prostitutes who have an eruption of herpes every time they menstruate; less frequently pregnancy and the puerperal state also induce the disposition to herpes progenitalis, which is readily explained on the same theory. It has been asserted, as a point of distinction, that pain never accompanies herpes progenitalis as it does herpes zoster. In Unna's experience, however, pain not only often accompanies the development of the exanthem, but usually precedes the eruption by one or two days. The eruption in men oftenest occurs on the second or third day, and not on the first day, after coition. He thinks compression of the nerves during penile erection may explain the pathogenesis of herpes progenitalis, much in the same way as, in Gerhardt's opinion, it accounts for the eruption of herpes labialis febrilis.—*Journal of Cutaneous and Venereal Diseases*, August 1883.

**SULPHURET OF POTASSIUM IN ACNE.**—Stelwagon of Philadelphia thinks this superior to simple sulphur in acne, though not in such general use. The sulphuretted odour of the drug is a disadvantage, but it admits of correction if desired; but, even undisguised, it is scarcely noticeable a few minutes after the application. It may be employed either as a lotion or an ointment. The strength varies from five grains up to half a drachm to the ounce. The proportion which is most generally required is about fifteen grains to the ounce. The lotion may consist of a simple watery solution, or small quantities of alcohol and glycerine may be added at times with advantage; the former, a half drachm to the ounce; the latter, about ten minims to the ounce. The efficacy of such a lotion is in some instances increased by adding to it sulphate of zinc in the same proportion as sulphuret of potassium. An ointment may be ordered instead of a lotion, and is occasionally of greater service. The lotion, however, is less tenacious of its odour, and, on the whole, is probably more efficacious. Before the preparation is applied, the face should be sponged with hot water for several minutes. The ointment then, if that is used, should be



well rubbed in, and not disturbed till morning, when the face may be washed. If the lotion is employed, it should be well shaken and rubbed in with a sponge or rag for three or four minutes, and allowed to dry and remain undisturbed till the face is washed next morning.—*Dublin Journal of Medical Science*, October 1883.

THE TREATMENT OF ECZEMA.—M'Call Anderson, in speaking of the use of tarry preparations, says that in many cases it is more appropriate to prescribe them in the form of ointments than of lotions, particularly when the parts feel stiff and rigid, and when there is a tendency to the formation of fissures. As a lotion he strongly advocates a mixture of equal parts of common tar, soft soap, and methylated spirits. Tarry lotions tend to discolour the parts to which they are applied, and not uncommonly prove too stimulating, and then are apt to aggravate, instead of removing, the eruption. The colour can be rendered paler and the lotion diluted, and at the same time the combination is miscible with water, by mixing mineral tar and spirit in certain proportions and adding a little strong solution of ammonia.

R Picis mineralis, . . . 3ij.  
Sp. rectificati, . . . 3ij.

Cola et adde.

Liquoris ammoniæ fort., . . ℥viij.  
Glycerini (Price), . . . 3vj.  
Aquæ distillatæ . . . 3xij.

Such a mixture forms a yellowish emulsion with water in all proportions. It can be sponged on two or three times a day. Mr Wheeler of Ilfracombe has informed Dr Anderson that he has discovered that by the addition of laminaria saccharina, as prepared by him to pix liquida, it is miscible with water in all proportions. Carbolic acid, best employed in solution, the strength varying with the degree of chronicity of the skin disease, removes at once the fetid odour which often exhales from eczematous surfaces, counteracts the itching, and sometimes heals up the excoriations and ulcerations with remarkable rapidity. While emollient ointments, which depend almost entirely upon their oily ingredients for their beneficial effect, are best applied spread on rags, stimulating ones should, as a rule, be melted on the point of the finger and rubbed firmly into the affected part, and none should be allowed to lie undissolved upon the skin; nor, in most instances, should their colour be perceptible after their application: the surface should merely have the appearance of having been recently moistened. The part may occasionally be cleaned with white of egg and soft tepid water (rain water, if possible), for if layer after layer be smeared upon the skin it becomes rancid, acts as an irritant, and is calculated rather to be prejudicial than otherwise.—*Journal of Cutaneous and Venereal Diseases*, July 1883.

MALIGNANT PUSTULE COMMUNICATED BY A FLY.—A somewhat

remarkable case is reported in the *Gaz. des Hôpitaux*, No. 102, for Sept. 5, as having occurred in the service of M. Mollière, surgeon in chief to the Hôtel Dieu at Lyons. The patient was bitten in the cheek by a large fly, which he immediately killed. The bitten spot in a few hours began to itch violently, but no swelling appeared till the next day. When the patient entered the hospital the whole cheek was of a livid colour and enormously swollen, especially over the malar bone, the centre of which region was occupied by a small black phlyctena, surrounded by a number of transparent vesicles. The eyelids were considerably swollen, and one of the submaxillary glands was enlarged and tender. There was no fever or other constitutional symptom. M. Mollière's treatment was prompt and energetic. He first completely destroyed the pustule by means of the thermo-cautery, and then injected the swollen parts, including the submaxillary gland, with a twenty per cent. solution of phenic acid. The only internal remedy employed was alcohol, which was administered in enormous quantities without producing the slightest sign of intoxication. The affected surface began to slough off on the third day, and in another week was entirely detached. The healing process proceeded rapidly, and at the end of three weeks the patient was discharged. Blood and serum drawn from the vicinity of the pustule having been forwarded to an eminent expert for examination, he succeeded in detecting a few filaments of the bacillus anthracis, and a cobaye which was inoculated with the fluids died in a few hours with all the signs of specific gangrenous infection. —*Journal of Cutaneous and Venereal Diseases*, August 1883.

ON THE ELIMINATION OF MERCURY DURING AND AFTER ITS CUTANEOUS EMPLOYMENT.—Dr Schuster of Aix-la-Chapelle has made a series of more than a hundred examinations respecting the elimination of mercury in syphilitic patients, who were either still under treatment by mercurial inunction or had been thus treated for some longer or shorter time (one to twelve years). When the urine was tested, mercury was often found in small, rarely in large, quantities, and not only during, but also some weeks after, the mercurial treatment. Frequently, however, the mercury was not found in the urine either during or after the treatment. It was therefore concluded that mercury is irregularly eliminated by the urine, and that, when introduced by inunctions, it either remains stored up in the organism or is excreted in some other way. When an examination was now made of the fæces, it was always found present in large quantities. It was found in relatively large quantities during the course of inunctions, and was present in the fæces for five and a half months after the end of the course. From the examinations it was concluded that the elimination of mercury by the fæces is regular and continuous, that its elimination after more extensive courses of inunctions is completed in six



months, and that, accordingly, persistence of mercury in the organism does not occur. It might be possible for mercury to be found in the fæces even eight months after a very prolonged course of treatment. But then, too, its excretion remains limited in time. In a large number of patients who had been under his care eight months and one year before, and who had been under mercurial treatment elsewhere for from two to twelve years, it was not found in either urine or fæces.—*Journal of Cutaneous and Venereal Diseases*, September 1883.

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## PERISCOPE OF OPHTHALMOLOGY.

By GEORGE A. BERRY, M.B.

HÆMORRHAGE FOLLOWING EXTRACTION OF CATARACT.—A case occurring in the practice of Dr Warlomont of Brussels, and recorded by him in the August number of the *Annales d'Oculistique*, of which he has so long been editor, brings very forcibly before one the danger of proceeding to the extraction in the second eye when the operation has been followed by hæmorrhage in the first. The patient, a woman aged 63, with double cataract, left mature, right nearly mature, was operated on by Warlomont ("downward section, with iridectomy.") Everything went perfectly smoothly, and before applying the bandage the edges of the corneal wound were found to be in perfect apposition. On her way to the ward, which was situated on the story below, the patient was seized with vomiting along with pain in the eye, and half an hour afterwards, when the dressings were removed, the lips of the wound were found to be pressed apart by a large blood-clot, and the eye completely destroyed by internal hæmorrhage. Enucleation was performed immediately. A careful microscopic examination of the eye showed that the vessels were perfectly healthy and that the hæmorrhage was post-choroidal. Such being the case, the hæmorrhage was ascribed to the accidental sudden escape of the vitreous, caused by the vomiting, and it was thought that there was no contra-indication to the performance of extraction on the other eye when the time came. Nevertheless Warlomont took the precaution of allowing Lebrun to perform the operation by his method without iridectomy. As before, the lens was removed without the slightest hitch. Shortly after removing the speculum the lids were separated, and the edges of the wound found to be pressed apart by presenting vitreous. A firm bandage was then applied with ice, and the patient kept in the horizontal position, being removed only to a bed at the side of the operating couch. Notwithstanding all these precautions, and though the patient maintained in every way perfect immobility, in a very few minutes the second eye was lost in exactly the same manner as the first. The facts of this case lead Warlomont to the following concluding remarks:—That "certain



eyes, without there being any indication observable, are incapable of withstanding the removal of the lens without the vacant place being filled up at once with the vitreous pressed suddenly forward, and causing rupture of even the most healthy vessels. From this fact we must conclude—*first*, that we should never operate on both eyes at once; and *secondly*, that when the first is lost by hæmorrhage, the other must only be considered fit for needling."

**CASE OF HEMiachROMATOPSIA.**—Only a few cases of this interesting form of hemianopia have as yet been observed, though they are not improbably of more frequent occurrence than this would lead one to suppose. Mr Swanzy's case (*Trans. Ophth. Soc.*) was that of a man of 77, who, on rising one morning, found his head somewhat light, and on returning to bed became unconscious and remained so till the evening. He recovered completely in a few days, without having had a trace of any paralysis. Five months afterwards, when first examined by Swanzy, he was found to have a complete hemianopia for colours to the left side, the line of demarcation passing vertically through the centre of vision. Colour vision was also slightly defective in the remaining portions of extreme periphery of the field.

**HOTZ'S OPERATION FOR ENTROPION.**—Four years ago, in the 9th vol. of the *Archiv für Augenheilkunde*, Hotz described a new operation which he had found successful for the treatment of entropion. In the last vol. (13th) of the same *Archiv* he has again occasion to recommend that method, which he has employed in 177 cases. The operation consists in making a cut through the skin in a level with the upper border of the tarsal cartilage of the upper lid (lower border of tarsus of lower lid), excising the layer of muscular fibres overlying the cartilage to the breadth of 3–4 mm., and then stitching the borders of the skin-wound to the edge of the cartilage. The two points to be attended to in order to secure success by this method are—*1st*, The position of the section in the skin, which must be on a level with the upper border of the cartilage throughout; and *2nd*, The proper position of the sutures, which must firmly include the *upper edge* of the tarsus. Hotz claims the following advantages for this procedure:—1. That it attains the aim in view without the least shortening of the skin of the lid. 2. That on this account it may be employed in cases in which, owing to the shortening produced by previous operations, other methods are not available. 3. That it in no way interferes with the conformation or function of the lid. 4. That the stretching of the skin, which restores the margin of the lid to its proper position, is the same whether the lid be raised or depressed, which is not the case when a piece of skin is excised.

**ON THE GROWTH OF THE CRYSTALLINE LENS.**—According to Otto Becker, the lens grows by the laying down of new fibres at its equator only as long as the individual grows. Priestley Smith

(*Trans. Ophth. Soc.*) believes that "the growth of the lens does not cease with that of the rest of the body, but is continuous, unless morbid processes intervene, throughout the whole period of life." He bases his opinion on the result of examination of 156 lenses, removed after death from 91 persons of different ages, the volumes of which were calculated from the measurements of fluid displacement along a graduated glass tube. The lenses in which cataract was beginning were found to be, as a rule, smaller than the transparent lenses of the same age. This result is favourable to the view taken by Becker, that the commencement of senile cataract is due to the separation from each other of certain of the layers of lens fibres in consequence of advancing sclerosis and shrinkage; and Priestley Smith suggests that the formation of cataract is "perhaps preceded by a period in which the rate of growth gradually falls below the normal."

**EPITHELIAL GROWTH FROM AN EYELASH IN THE ANTERIOR CHAMBER.**—This case occurred in the practice of Mr Rockcliffe of Hull, and is reported in the last number of the *Transactions of the Ophth. Society*. A man received a blow which lacerated the cornea and caused prolapse of the iris, and, at the same time, some slight injury to the lid. The iris receded under atropine, and the injury was not followed by much inflammation. He was first seen six weeks after the accident. At that time what was supposed to be an eyelash was seen lying in the anterior chamber, and an attempt was made to remove it, but without success. A little more than a year later a tumour  $6 \times 2 \times 2$  mm. was removed along with a portion of iris. The growth was examined by Dr Brailey, who reported, "The mass consists of flattened epithelium cells, exactly like the more superficial cells of the conjunctiva, and their nuclei stain very distinctly. It looks as if the cells of the root-sheath of the eyelash had proliferated in the anterior chamber."

**A CASE OF TEMPORAL HEMIANOPIA OF THE RIGHT EYE PRODUCED BY TREPHINING THE LEFT OCCIPITAL BONE.**—A servant girl, aged 22, after falling down stairs, became for some time unconscious, and then, recovering her senses, was conscious of a severe pain at a distinct spot on the left side of the back of her head. The accident happened in November 1881. Next day the pain became still more severe, and was associated with paralysis of the right extremities and marked hemianæsthesia of the same side. After two and a half months the movements of the leg were sufficiently restored to enable her to go about, but a further time elapsed before the arm recovered its power, while the headache, though not so constant or severe, still persisted. In May 1882 she was able, however, to begin her work, but was obliged to avoid much bending of her head, as that brought on the pain. On the 29th June the pain reappeared with increased severity and without any apparent cause, and was followed by a recurrence of the paralysis and



hemianæsthesia. Dr Nieden was then called upon to examine the state of the eyes, and found them normal in every respect; there was then no diminution of the field of vision. As the condition of the patient remained much the same, and she was able to indicate a definite spot from which the pain seemed to proceed, the operation of trephining in this region was decided on, and performed on the 30th of August. After removing the periosteum a horizontal crack in the bone was found just at the place indicated by the patient. The operation of trephining over this was difficult, owing to the bone being so much thicker to the posterior or right side of the trephine than to the left, and consequently a portion of the dura mater was slightly injured. The position of the trephining was just where the peak of the occipital lobe of the brain lies against the bone. The operation was followed by some disturbance, with the sloughing of a piece of the cortical matter of the brain, but ended in gradual recovery from the paralysis and pain, and with a loss of the peripheral vision to the temporal side of the right eye, and a certain amount of diminution of the central vision as well. Charts taken at different times are given in Nieden's paper (*Gräfe's Archiv*, 29, 3), showing the exact position to which the field of vision was destroyed. The nature of the defect shows that only a portion, and probably the medial portion, of the visual centre was destroyed by the sloughing of the small portion of the cortical matter caused by the wound made in performing the operation.

**A CASE OF IDIOPATHIC GANGRENE OF THE LID.**—A female child, four months old, apparently in perfect health, was brought to Hilbert (*Centralblatt f. Augenheilkunde*, Oct.) with a scab on the skin of the right upper lid. This had been noticed by the mother for three or four days, and had gradually increased in size, and was then 5 mm. in diameter. It was easily removed, and the raw surface dressed with ointment. Two days later, when the child was next seen, a great change in the appearance of the part had taken place; the scab had increased to double the size, and there was oedema and redness of the lid, along with some fever. During the next four days the same symptoms continued, till finally the scab became black and a line of demarcation formed round it, and a circular slough of skin was removed with a pair of forceps. The subjacent surface was touched with caustic, and speedily assumed a healthy granulating appearance, then rapidly healed, leaving a circular scar without any puckering or ectropion.

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#### PERISCOPE OF STATE MEDICINE.

By JAMES ALLAN GRAY, M.A., M.D. Edin., F.R.C.P.E.

**A PLAN FOR SCHOOL SANATORIUMS.**—Under this heading, in the *Practitioner* for October, Mr Charles E. Paget, Hon. Secretary of the Epidemiological Society of London, contributes a paper which



is well worthy of perusal. Mr Paget calls attention to the frequent absence of sufficient accommodation for the isolation and treatment of infectious diseases in schools, especially when, as not rarely happens, a second epidemic appears before a previous epidemic has quite ceased. By way of remedy, Mr Paget describes a plan for a model sanatorium, the essential principle of which consists "in there being a detached administrative block and two distinct and separate pavilions, each of which is for the reception of one disease at a time." The pavilions are to be one-storied, and are each to contain a single ward. But the wards are to be of unequal size. Thus in a school of 400 to 500 pupils accommodation should be provided in one ward for eight, and in the other for twelve beds. Further details are given at considerable length, and the paper is illustrated by suitable drawings.

POISONING BY THE EDIBLE MUSHROOM (*Helvella esculenta*). — This mushroom contains in every case an extremely active poison, and would therefore have to be separated from the group of edible mushrooms but for the fact that boiling is capable of removing the poisonous salts. Complete drying likewise destroys the injurious properties. The product of the boiling of this mushroom, when in a fresh state, is very noxious, but is much less so when the mushroom has been subjected to a certain amount of drying. The poison is easily and completely soluble in warm water, less so in tepid water, and not capable of solution at all in cold water; it is very unstable, decomposing with the greatest readiness. It is a blood-poison, dissolving the hæmoglobin very rapidly, causing hæmoglobinuria and bloody icterus. The group *Helvella suspecta*, spoken of by Kromholz, has no existence in reality.—Bostroem, in *Deuts. Arch. f. Klin. Med.*, quoted in *Revue des Sciences Médicales*, No. 43, p. 77.

POISONING BY CHLOROFORM TAKEN INTERNALLY.—A labourer aged 60 years, suffering from asthma, swallowed a liniment composed of olive oil and chloroform (ää 20 grammes = ää 3vss.) which had been ordered him as an application for a pain in his shoulder. Half an hour later he was found by the author in a state of profound coma, with stertorous respiration, cyanotic lips, contracted pupils, and abolished reflex action. The patient was raised into a sitting position as quickly as possible, the stomach-pump applied, and a litre of yellowish material with the characteristic odour of chloroform removed. The stomach was thoroughly washed out, but in spite of this the man's condition was not much altered, the respiration remaining slow, the pulse dicrotic, and the insensibility absolute. The tongue was pulled sharply forwards, and the skin and mucous membranes stimulated. An hour and a half later the man coughed, and began to respond to cutaneous stimulation, after which he quickly regained the use of his other senses.—Thomayer, in *Wien Med. Woch.*, No. 39, 1882, quoted in *Rev. des Sciences Médicales*, No. 43, p. 75.

*Note.* — Poisoning by drinking chloroform is by no means unusual. Dr Mygge of Copenhagen (*British Medical Journal*, vol. i. p. 604, 1881) collected a series of sixteen cases up to 1872, and published notes of them in the *Nordiskt Medicinskt Arkiv*, along with a fatal case which had occurred in his own practice. In that case a man of intemperate habits had swallowed 40 grammes (about 11 drachms) of pure chloroform six days before his admission into hospital. Shortly after the poison had been taken, narcotism had supervened; but from this he recovered without the use of remedies, and shortly thereafter he several times vomited matter which smelt strongly of chloroform. On admission to the hospital he was found to have hepatization of the lower lobe of the right lung, with copious expectoration of sanguineous and frothy matter, similar to what he had been expectorating since the night after the poisoning. His mouth had a very foetid odour, he vomited much bilious matter, had fluid, viscous, but non-sanguineous stools, suffered from epigastric pain, and had very disturbed sleep. He lived two days after admission, and at the post-mortem examination they found great destruction of the mucous coat of the stomach, and numerous small ulcers in the intestine, accompanied by hepatization of the lower lobe and congestion of the remainder of the right lung,—a condition of the pulmonary organs which Dr Mygge points out as having been found in almost every case in which a necropsy had been made.

As illustrative of the dose of chloroform which may be swallowed without fatal result, an interesting case is recorded by Dr Oliver in the *British Medical Journal*, vol. i. p. 775, 1882, where it is stated that upwards of three ounces of pure chloroform were swallowed by a Frenchman of slender build. In this case no emesis occurred, and an hour and a half elapsed between the taking of the poison and the arrival of the patient at the hospital, at which latter time his condition was as follows:—"Respiration had ceased; the pulse, numbering 20 per minute, was hardly to be felt at the wrist; the surface of the body was quite cold, and of a dusky pallor; the lips were livid, and the pupils widely dilated. The odour of chloroform was distinct." However, under treatment with artificial respiration, galvanism, nitrite of amyl, ether, coffee, and brandy, the coma, which had lasted seven hours, passed off, and the man recovered completely.

**TRICHLORPHENOL, THE BEST DISINFECTANT FOR GANGRENOUS AND FOUL WOUNDS AND ULCERS.**—In 1879 Dianin noticed that a solution of carbolic acid, to which chloride of calcium had been added, was of great use in foul ulcers, and later he satisfied himself that this was due to the trichlorophenol thus formed. This combination was discovered in 1836 by Loran, and has the formula  $C_6H_2Cl_3OH$ ; it is a phenol, wherein three atoms of hydrogen are replaced by three atoms of chlorine. It possesses the char-

acteristics of an acid, forming well-defined salts with potash, magnesia, ammonia, baryta, lead, and calcium. The calcium salt is that which is formed by adding the chloride of lime to the solution of carbolic acid. This combination is an excellent disinfectant, being 25 times more powerful than ordinary phenol as an antiseptic. Experiment shows that the power of arresting fermentation, which is possessed by trichlorphenol and its potash and calcium salts, is marked alike whether in arresting the fermentation in wine, putridity in the blood, or the ammoniacal decomposition in the bladder. Clinical observations were made as to its effect on gangrenous ulcers of the limbs, gangrenous phlegmon, wounds from machinery, complicated fractures and dislocations, carbuncles, cancerous ulcers, caries, etc., all more or less gangrenous, and throwing out foul-smelling secretions. For complete purifying of the sloughing surfaces and the production of healthy granulations usually four to six days were enough, and rarely ten to thirteen days were required. The method of application was generally to apply to the sloughing parts a five per cent. solution of the trichlorphenol, and thereafter to cover the parts with a bandage soaked in a one per cent. solution. Sometimes the dried trichlorphenol was powdered on and the bandage allowed to remain from five to eight days. The drug was also used for soft sores, diphtheria, etc. In all cases the disinfectant and deodorizing powers were very strong. The smell of the drug may be hid by the use of oil of lavender. The soda salt has no smell. All the preparations are cheap.—Dr Dianin, in *Petersb. Med. Wochenschr.*, No. 38, p. 326, 1882, quoted in *Schmidt's Jahrbüch.*, No. 3, p. 233, 1883.

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## Part Fifth.

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### MEDICAL NEWS.

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UNIVERSITY OF EDINBURGH.—The following is the official list of candidates who passed the first professional examination during the month of October.—J. H. Acheson, Andrew Aikman, John Allison, George Anderson, James Atkinson, A. F. Barlow, H. A. Beckers, Arthur Beecroft, A. J. Beehag, E. D. Bell, J. S. Bell, C. N. Bensley, E. G. Blanc, G. P. Boddie, A. E. Booth, Alfred Borradaile, N. L. Boxill, Daniel Brown, T. H. Bryce, F. J. Butt, W. G. Campbell, Edmund Capper, E. W. W. Carlier, E. C. Carter, J. T. Chamberlain, F. H. Clarke, Arthur Clarkson, J. H. Conyers, R. J. Copeland, A. J. W. Dalzell, E. C. S. Daniel, E. N. Darwent, D. N. P. Datta, Walter Denby, W. C. Drew, J. C. Dunlop, F. C. W. Durrant, Alexander Edington, John Edmondson, W. J. Fairlie, Malcolm Farquharson, Oliver Field, I. G. Fletcher, R. J. Fox, N. S. Fraser, A. E. Frere, Thomas Galbraith, John Galletly, L. D. Gamble, P. C. Garson, G. D. C. Gibb, H. L. Gordon, R. P. R. Gordon, E. A. Hall, W. H. A. Hall, J. F. Haswell, L. A. Hawkes, Thomas Henderson, H. B. Hetherington, John Hewat, William Hewat, J. H. Horsburgh (with distinction), G. T. W. Howison, P. G. Hullard, R. P. Jack, J. B. Jameson, Robert Jardine, F. H. Jeffcoat, Benjamin Jones, G. E. Keith, C. P. Kennard, P. M. Kerr, Alexander Kirkwood, W. H. E. Knaggs, D. J. Lawson, W. L. Legg, C. A. S. Leggatt, P. A. Lindsay, T. F. M'Farlane, A. D. M. Macintyre, H. J. Mackenzie, Thomas Mackenzie, M. A. ; H. R. Maclean, David M'Nish, R. H. Maddox, C. C. Manifold, H. H. Marshall, G. J. M. Melle, H. B. Melville, James Monteith (with distinction), J. T. Morrison, Arthur Morrow, R. H. Mortlock, Edwin Morton, G. W. Moseley,



James Musgrove, C. S. Paterson, W. A. Peterkin, M. J. Petty, William Philp, M. A.; G. A. Pirie, G. H. Pollard, Alexander Primrose, A. R. Rainy, W. B. Reid, Adam Richardson, E. V. Roberts, Andrew Robertson, M. A.; J. W. Rodger, John Ross, Andrew Rowand (with distinction), L. A. Ryott, S. R. Savage, M. A. Scott, Arthur Sellers (with distinction), W. C. Sillar, J. C. Simpson, E. W. Skinner, A. E. Sloman, James Smith, Wm. Smith, A. C. Smyth, C. E. G. Stalkartt, W. H. S. Stalkartt, Wm. Steven, Thomas Stevenson, G. G. Stuart, D. G. Sutherland, William Symington, A. H. Taylor, A. W. Taylor, H. I. Taylor, John Teixeira, Griffith Thomas, F. W. Thomson, George Thomson, Joseph Tillie, H. W. M. Tims, John Townsley, M. L. Trechmann, W. A. Turner, H. W. Vernon, Herbert Vine, James Waddell, H. J. Walker, H. J. Waller, T. H. Ward, Percy Wardle, H. F. Waterhouse, G. A. Watson, T. M. Watson, J. P. Watt, M. A., Aberdeen; J. I. Welch, M. A.; J. R. Whitwell, John Wilkinson, C. L. Williams, J. R. Williams, W. W. Williamson, A. O. Wilson, A. W. Wilson, C. B. Wilson, George Wilson, Bermuda; W. B. Wilson, H. W. Wise, H. S. Wood, H. M. Woodhead, W. F. Wright, D. J. van Wyk, L. G. Wynn, E. B. Young, and W. A. Young.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on the 7th to 10th November, and were admitted L.R.C.P. Ed.:—John Protheroe, Kingston-Thames; Henry Newsome Oglesby, Melbourne, near Derby; John Holliday Naylor, Drighlington, near Leeds; Francis Alexander Adams Bush, London; Thos. Decimus Richards, Redruth, Cornwall; Jenkin Jenkins, Aneaster, Grantham; Samuel George Milner, London; Robert Steer Bowker, Sydney, N. S. Wales; Lawrence Ernest Albert Salmon, Portishead, Somerset; John Weller, Amersham, Bucks; John Francis Molyneux, London; Andrew Wallace Walker, Dollar; Charles Edward Cochrane, Canada; Matthew Johnston, Bedford; William Phillips, Woodbrooke, Portarlington; Montague Smith, Weston-super-Mare; William Barker Ray, North Wales; Edmund Arthur Savage Elliot, Kingsbridge; John Elliot Langstaff, Ontario, Canada; John George Wright Bullock, Liverpool; Arthur Livingstone Brown, Ontario, Canada; George Herbert, Tonbridge, Kent; George Herbert Dawson, Leeds; Albert Durand Watson, Ontario, Canada; Hugh Chapter Robinson, London; Edward Fowler Greenhill, Calcutta; Charles Stott Chadwick, Manchester; Gilbert Herbert Coates, Salisbury; George Frederick Dixon, Norwich; Edmund Napier Close, Salford; Hyacinth D'Arcy-Ellis, Brierly Hill, Staffordshire; Arthur Jones, Lancashire.

ANNUAL MEETING OF THE SCOTTISH MIDLAND AND WESTERN MEDICAL ASSOCIATION.—The twelfth annual general meeting of the Scottish Midland and Western Medical Association was held in the Religious Institution Rooms, Buchanan Street, Glasgow, on Friday, 12th October, at 3 o'clock P.M. The chair was taken by Dr Longmuir, Bathgate, President of the Association, and there was a large attendance of members. The minutes of last meeting were read and approved of. Dr M'Gown, Bellshill, with the unanimous approval of the meeting, was nominated President elect. The secretary's and treasurer's reports were read and approved of, and the accounts of last year audited and found correct. Dr Fotheringham, Motherwell, was admitted a member of the Association. It was proposed by Dr Boyd, Slamannan, that the Association express regret at the loss it has sustained through the death of Dr Moffat, Falkirk. This was seconded by Dr Longmuir, Bathgate; and the secretary was instructed to convey to Mrs Moffat the condolence of the Association with her on account of her bereavement. Dr Arthur, Airdrie, brought forward the question of Medical Fees for Colliery Appointments, and a committee, consisting of the secretary, treasurer, and Dr Boyd, Slamannan, was appointed to revise the old circular on the subject. It was settled that the next annual meeting should be held on the second Friday of October 1884. The President

then delivered his inaugural address. After some remarks on medical reform, and a suggestion that the meetings of the Association should be enlivened and rendered more interesting by the reading of papers on professional subjects, he read a very interesting paper on "Chimney-Sweeper's Cancer as found among the Mineral Oil Workers." A vote of thanks to the President for his address was moved by Dr Stewart, Greenock, and seconded by Dr Boyd, and it was resolved that, with Dr Longmuir's permission, the paper should be published in the *Edin. Med. Journal*, and printed separately for circulation among the members of the Association. The members afterwards adjourned to the Central Station Hotel, and enjoyed an excellent dinner, the chair being taken by the President.

**CHARLES MOREHEAD PRIZE.**—An annual prize in memory of the late Dr Charles Morehead has been founded in the University of Bombay. It is to be called the Charles Morehead Prize, of the value of 200 rupees, to be awarded every year to the candidate who passes the L.M. and S. examination with the highest number of marks in clinical medicine.

**COCKING'S POROPLASTIC SPLINT FOR FRACTURES OF THE FORE-ARM.**—Dr Henry Fisher of Chelsea, writing in the *Lancet* for 27th October, recommends this splint because it is easily put on, requires no padding, thoroughly prevents displacement after once adjusted, permits of inspection of the part, because it does not meet round the arm, being open at the radial margin, and, lastly, acts as a sling as well as a splint. This splint differs from the ordinary poroplastic simply in being ready moulded for application as supplied by Mr Cocking, the patentee. There are six different sizes, to suit all ages. From the woodcuts in Dr Fisher's paper we would suppose that the splint will prove useful.

**EXTIRPATION OF THE LARYNX.**—In the *Lancet* for 15th September 1883, Surgeon-Major M'Leod of Calcutta records a most interesting case in which this operation was performed. The patient was a clerk, a Hindu, in very poor health. The disease was epithelioma, "which appeared to have originated in the mucous membrane, and grown outwards, implicating the skin and thyroid body secondarily." The entire larynx was removed, along with the thyroid body, and the trachea divided just below the cricoid cartilage. There was a considerable amount of skin and surrounding texture removed. The only circumstances that caused anxiety during the operation were bleeding from one of the thyroid vessels, on which the ligature slipped, and a sudden embarrassment of the respiration which occurred when the trachea was cut through, but which lasted only for a moment. Unfortunately the patient died of phthisis between five and six months after the operation. This case is valuable as showing what may be done in the way of removing portions of the respiratory apparatus without immediate risk to life. Mr M'Leod's patient recovered sufficiently to be able to go about, to



swallow food, and to speak fairly well by means of an ingenious apparatus invented and prepared for him by Mr W. T. Woods, surgeon dentist.

OPERATIONS for removal of new growths from the bladder have been attended with results that will compare favourably with any other of the major operations in surgery; and when we consider the dangerous state to which many subjects of tumour in the bladder are reduced by hæmorrhage and pain, and when we further consider the number of pathological specimens of easily removable tumours which exist, in which marked and sometimes fatal hæmorrhage has been the only symptom, there is ample justification for exploration in these obscure cases, and for the removal of any growth that may be detected. The justification for exploration of the bladder in cases which baffle diagnosis by the more common means is obvious if we bear in mind that digital exploration has been made during the last three years in twenty-nine cases, and that a tumour capable of removal has been found in eighteen of them.—*Paper on the "Surgical Treatment of Tumours of the Bladder," by Walter Whitehead, F.R.C.S.E., and Bilton Pollard, M.D., Lancet, 20th October 1883.*

THE CHOLERA AND LONDON.—The London medical journals, and also many of the London big swells, at present are taking a great deal of interest in the slums of their city. The "upper ten" seldom pay any attention to their poorer and inferior brethren. A year ago it would have been difficult to get any one to believe, still less to do anything to relieve, the misery of those thousands in the great city who are living from hand to mouth, always in poverty, and usually in filth and misery. But now the fear is raised that these filthy places and these wretched people may be the means of letting cholera into the midst of the metropolis, and immediately there is an outcry and great interest taken in the sanitary, or rather unsanitary, condition of those who previously were only hated and despised. Formerly nothing could or would be done for the sake of the poor people themselves, but now great things are projected for the sake of those who are interested in them. Whatever be the motive, we are delighted to see the West End interested in the East End. We sincerely hope that the interest won't end with the cholera scare, but continue to the mutual advantage of both parties.

THE following extract from the pages of a contemporary is not a bad description of what one meets with in provincial hospitals:—"If called upon to distinguish house-surgeons according to their characteristics, we should divide them into two classes: (1) Young men with too much self-confidence, and (2) those with too little. The former usually come fresh from the schools, where they have perhaps taken several of the numerous prizes, full of book knowledge, and puffed up by their testimonials. When they first enter a provincial hospital they regard country surgeons as "old fogeys"



or past the times ; they are apt to take too much upon themselves, and unless sharply looked after a catastrophe shortly ensues. The second class is very much to be preferred. They rely at first too little on themselves, and may now and again needlessly call upon the honorary staff. Such trouble is not, however, resented, and the honorary surgeons by kindness and courtesy will do much to enable a young man in a short time to gain that coolness and self-confidence which are necessary to make him an efficient surgeon."

SEVERAL asylums have recently been supplied with fire extinguishing appliances. The Moultsford Asylum and Dr Gilland's Asylum at Wallingford have adopted the new oak-bark canvas hose for their hydrants. At Aylsham, an "Universal Fire Engine" has been ordered, while other establishments have been provided with London brigade fire-pumps, extingtors, and Chute fire-escapes, of the Merryweather pattern.

INTERNATIONAL MEDICAL CONGRESS.—Reminding you that the 8th International Medical Congress (according to the notice already published some months ago in the medical journals) will be held in Copenhagen from the 10th to the 16th of August 1884, we have the honour of communicating to you that the General Organizing Committee, formed for the preparatory work, is composed of the following members, living either in or near Copenhagen :—President, Professor Dr P. L. Panum ; Secretary-General, Professor C. Lange ; Secretaries, Dr O. Bloch, Dr C. F. Salomonsen, and Surg. Genl. Joh. Moller ; Honorary Treasurer, Professor Dr E. Hansen Grut ; besides the Presidents of the special committees of the Section of Anatomy, Professor Chievitz ; Physiology, Professor Dr P. L. Panum ; General Pathology and Pathological Anatomy, Professor Dr C. Reisz ; Medicine, Professor Dr F. Trier ; Surgery, Professor Dr Holmer ; Hygiene and State Medicine, Dr E. Hornemann ; Military Surgery and Medicine, Director-General of the Medical Department of the Army Salomon ; Mental and Nervous Diseases, Professor Dr Steenberg ; Obstetric Medicine and Surgery and Gynæcology, Professor Dr Stadfeldt and Professor Dr Howitz ; Diseases of Children, Professor Dr Hirschsprung ; Ophthalmology, Professor Dr E. Hansen Grut ; Diseases of the Skin and Syphilis, Professor Dr Haslund ; Diseases of the Ear, Dr W. Meyer ; Diseases of the Throat, Dr W. Meyer. The special committees formed for the aforesaid sections have, when they found it useful, completed their number by members living outside Copenhagen, partly in Denmark, partly in the other Scandinavian countries. In order that the meeting of so many distinguished medical men, whom we hope to see on this occasion, may be as advantageous as possible, the Organizing Committee, following the example of the later Congresses, will communicate with distinguished men of different branches, and of different countries, in order to prepare a programme. This programme, as well as the rules, will be forwarded to those of our colleagues whom we suppose take an interest in the work of the Congress, and who might be inclined to participate in

it. In order that the programme may be ready as soon as possible, we should be pleased if communications referring to the work of the Congress were sent to the undersigned Secretary-General before the next 1st of October, so that it may be possible for us to have regard to them in arranging the definite programme. The programme and rules will be forwarded, as soon as possible, to every one qualified to participate in the Congress who within the limited time has announced to the Secretary-General his interest in the Congress, and his eventual intention of participating in it—if possible, also, which section he chiefly intends joining.

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### OBITUARY.

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#### ALEXANDER HOGG, M.B. and C.M.

OUR profession has sustained an unexpected loss from the death of Alexander Hogg, M.B. and C.M. Mr Hogg was a native of Stenhousemuir, in Stirlingshire, and was educated at the Sessional School at Larbert, from which he passed directly to the University of Glasgow, where he gained honours in mathematics and classics, and was a very successful student of medicine. After graduating in 1878 he became house surgeon to the Glasgow Western Infirmary under Dr George Buchanan. In 1879 he commenced practice at Workington, Cumberland, in partnership with Dr J. McKerrow, and, to use the words of the *Carlisle Journal*, "By his courteous and gentlemanly bearing and extremely gentle and sympathetic nature he had endeared himself to a large circle of warm friends, and had deservedly won the respect and esteem of the whole community. He had been for nearly two years the medical officer of health to the Workington Local Board, a post which his recognised ability on hygienic matters rendered him well qualified to fill."

Mr Hogg had been ailing when called upon by a telegram to come to see his sister, Miss Janet Hogg, who was dying, and he took to his bed half an hour after reaching his father's house. From the beginning he recognised the fatal course of the disease, which was pneumonia, and he died on the evening of Friday, the 2nd November, exactly a week after the death of his sister. Gifted with a strong intellect, great powers of application, and an honest, truthful, and friendly nature, Mr Hogg easily accomplished everything he undertook; but his useful and promising career has been cut short by an early death, for he was only in his 27th year when laid in the parish churchyard at Larbert.

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### CORRESPONDENCE.

33 PICCADILLY, MANCHESTER,  
12th November 1883.

DEAR SIRS,—Mr Lund desires me to thank you for your kindness in noticing his pamphlet on the antiseptic question in the *Edin-*

*burgh Medical Journal*, and to ask if you do not think in all fairness that the gentleman who wrote the review must have read the pamphlet rather hastily, as he has attributed to Mr Lund as his own the views of others, to whom he objects. Mr Lund also adds, that the object of the oration is to try to discover how it is that even to this day men of repute, who ought to be its admirers, cavil at its principles or ridicule its practice. They call it the carbolic acid treatment, or the spray dressings, or Lister's plan, but they will not listen to it, or acknowledge the grand principles which underlie the whole idea—that is, the avoidance of those chemical changes which attend upon the various degrees or stages of putrefaction and their consequences.—I am, dear Sirs, yours faithfully,

(32) J. E. CORNISH.

Messrs OLIVER AND BOYD.

945-4.

*To the Editor of the Edinburgh Medical Journal.*

EDINBURGH, 14th November 1883.

SIR,—In answer to the above letter from Mr Lund's publisher, which you have kindly handed to me, I wish to say that, after carefully re-reading the address, I see that I have not done Mr Lund the justice, which I now seek to do, of recognising in him a warm advocate of antiseptic surgery. I regret exceedingly that by misreading part of the address I fell into the mistake of supposing Mr Lund was undecided in his opinions regarding Listerian antiseptics,—I am, Sir, yours, etc.

THE REVIEWER.

### PUBLICATIONS RECEIVED.

- Army Medical Department Report for 1881.  
 ROBERTS BARTHOLOW, M.A., M.D., LL.D.,  
 —A Practical Treatise on Materia Medica  
 and Therapeutics. D. Appleton & Co.,  
 New York, 1884.  
 J. GRAHAM BROWN, M.D.,—Medical Diag-  
 nosis. Bell & Bradfute, Edin., 1883.  
 ALFRED H. CARTER, M.D.,—Elements of  
 Practical Medicine. H. K. Lewis, Lond.,  
 1883.  
 W. BRUCE CLARKE, M.A., M.B.,—The  
 Dissector's Manual. Cassell & Co., Lond.,  
 1883.  
 G. DRAGENDORFF, Ph.D.,—Plant Analysis.  
 Baillière, Tindall, & Cox, Lond., 1883.  
 DAVID DRUMMOND, M.A., M.D.,—Diseases  
 of the Brain and Spinal Cord. Henry  
 Kimpton, Lond., 1883.  
 J. MILNER FOTHERGILL, M.D.,—The Physi-  
 ological Factor in Diagnosis. Baillière,  
 Tindall, & Cox, Lond., 1883.  
 C. J. HARE, M.D.,—Good Remedies—out  
 of Fashion. J. & A. Churchill, Lond.,  
 1883.  
 NORMAN PORRITT, L.R.C.P. Lond., M.R.C.S.  
 Eng., etc.,—The Operative Treatment of  
 Intra-Thoracic Effusion. J. & A.  
 Churchill, Lond., 1883.  
 Dr SEVERIN ROBINSKI, —Zur Kenntniss der  
 Augenlinse und deren Untersuchungs-  
 methoden. Eugen Grosser, Berlin, 1883.  
 H. L. SNOW, M.D.,—Clinical Notes on  
 Cancer. J. & A. Churchill, Lond., 1883.  
 CHARLES MEYMOTT TIDY, M.B., F.C.S.,—  
 Legal Medicine. Part II. Smith, Elder,  
 & Co., Lond., 1883.  
 Transactions of the American Otological  
 Society. Vol. III. Part 2.  
 Transactions of the Medico-Chirurgical  
 Society of Edinburgh. Vol. II. Oliver  
 and Boyd, Edin., 1883.  
 Dr F. W. WARFVINGE, —Arsberättelse (den  
 fjerde) fran Sabbatsbergs Sjukhus i  
 Stockholm för 1882. P. A. Norstedt &  
 Söner, Stockholm, 1883.  
 A. T. TUCKER WISE, M.D., etc.,—Wiesen  
 as a Health Resort in Early Phthisis.  
 Baillière, Tindall, & Cox, Lond., 1883.













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